THE
RAILWAY GAZETTE
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INCORPORATING
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GOODS FOR EXPORT

The fact that goods made of raw materials in short supply owing to war conditions are advertised in this paper should not be taken as indicating that they are available for export

NOTICE TO SUBSCRIBERS

Consequent on paper rationing, new subscribers cannot be accepted until further notice. Any applications will be put on a waiting list which will be dealt with in rotation in replacement of subscribers who do not renew their subscriptions

POSTING "THE RAILWAY GAZETTE" OVERSEAS

We would remind our readers that there are many overseas countries to which it is not permissible for private individuals to send printed journals and newspapers. The Railway Gazette *possesses the necessary permit and facilities for such dispatch.*

We would emphasise that copies addressed to places in Great Britain should not be re-directed to places overseas

REDUCTION IN SIZE OF PAGE

To economise in paper our readers will observe a slight reduction in the size of The Railway Gazette *in that the size of the page has been reduced from* 9 *in.* × 12 *in. to* 8½ *in.* × 11½ *in. The type area of the page remains the same, namely,* 7 *in.* × 10 *in., but the surrounding margins have been reduced. This of course detracts from the appearance of the paper, but is one of the exigencies of the war*

TO CALLERS AND TELEPHONERS

Until further notice our office hours are:
Mondays to Fridays 9.30 *a.m. till* 5 *p.m.*
The office is closed on Saturdays

ANSWERS TO ENQUIRIES

By reason of staff shortage due to enlistment, we regret that it is no longer possible for us to answer enquiries involving research, or to supply dates when articles appeared in back numbers, either by telephone or by letter

ERRORS, PAPER, AND PRINTING

Owing to shortage of staff and altered printing arrangements due to the war, and less time available for proof reading, we ask our readers' indulgence for typographical and other errors they may observe from time to time, also for poorer paper and printing compared with pre-war standards

Post-War Industry and Exports

THE House of Commons devoted two days last week to a debate on economic policy, and there can be no doubt, from a study of the speeches that were made, that both the Government and the generality of members are fully seized of the importance of early consideration of post-war economic problems. Equally, the Government has declared wholeheartedly for encouraging the resuscitation of export trade, a matter in which the railways are intimately interested. The Chancellor of the Exchequer declared that as a nation we should largely depend on them for our means of living after the war, and our hopes and plans for the betterment of this country greatly rested on them. In our post-war trade efforts there had to be a high priority for export trade. He pointed out that for some of the great industries the immediate post-war future offered better things, but there were industries which in the markets of the world would be subject to strong competition. It would be imperative that we should look beyond the immediate post-war years, when almost anything that was made could be sold to a period when purchasers could once more select according to policy and price. Mr. Hugh Dalton, the President of the Board of Trade, who wound up the debate, said he had made arrangements for an intensified study of post-war problems, and that consultations were now going forward systematically with national bodies and with particular interests representing industry. He declared that the Government's policy was full employment, and that this would be achieved by expansion rather than by restriction, and stability of prices, but not stagnation. He disclosed also that he had commenced an investigation into the post-war use of State munition factories, and also that he wished each industry, which was being approached by the Board of Trade, to indicate how far it considered modernisation of its plant would be necessary at the end of the war. He added that then he might approach the Chancellor to see how the Exchequer could assist.

Continuation of Controls

The Government spokesman made it clear that, because inflationary tendencies would be more potent after the war, it was intended to maintain, for some time, a considerable measure of control of the nation's economic life. It was expected that the general price level might settle down at a figure not very different from that at present, without imposing an impossible burden on the Exchequer. There will be wide agreement with the view put forward by the Chancellor that it will be necessary to adapt and develop our industrial and commercial organisations, machinery, and methods to new and unexampled conditions, and that we shall have to regain our technical leadership, and pay increasing attention to training and scientific research. The economic position of this country will be far from easy; it could become dangerous. No new economic theory or financial manipulation, however ingenious, could displace or alter this hard but inescapable fact. Those who appear to think that in peacetime it would be possible to maintain expenditure at wartime levels to pursue vaguely defined economic plans were answered by the Chancellor when he pointed out that we had in the present conflict already realised a substantial proportion of our investments and put the proceeds into the war. It would take time to recreate the sources of the monetary income represented by foreign investments, and this was one reason for relying in the main on a considerable expansion of export trade. There can, indeed, be no doubt that there is no easy solution to our post-war problems. It can be achieved only by initiative, and a consistent, well-defined, and strongly supported policy.

Spare Time War Work Scheme

Despite the intensive Government drive to organise the man power of the country, there must still be numbers of persons possessed of skill which could be devoted in spare time to the national interest, but who have failed to make suitable contacts through existing official channels. It is unlikely that this applies to many readers of The Railway Gazette, as they are engaged for long hours in work of vital importance, but retired railway servants, and friends or relations of our readers may be interested to learn of the provision of a focal point for the direction of such services as may be available for light factory work in the evenings and at week-ends. The Bank Officers' Guild has established a spare time war works scheme for placing men and women, chiefly of the "black-coated" class, in factories for work during the evenings between the hours of 6 and 9 or 10 p.m., and on Saturday afternoons and Sundays. The guild has already been successful in placing workers in some 50 factories in almost all parts of London to the extent of some 1,500 persons. More London volunteers continue to be required, however (the organisation does not extend to provincial towns), and Mr. N. H. Foster would be very pleased to receive offers at the office of the guild, Bevis Marks House, Bevis Marks, E.C.3. We have seen details of the types of work for which volunteers are sought, and these range from the manufac-

ture of camouflage nets, on piece work in the Central London area, enabling approximately 6s. a shift of 4 hours to be earned, to light engineering work in various suburban parts of the Metropolitan area, particularly suited to those with model making experience and therefore capable of handling small tools. Provision is made for volunteers to offer their services for certain evenings only, and also for grouping friends in teams to work together.

British Investments in Latin America

As might be expected, there was in the year 1942 an improvement in the financial position of a great many undertakings operating in Latin America, and the yearly compilation of the return derived from British investments in that territory, which *The South American Journal* has undertaken for many years, shows that there was an all-round increase in the remuneration received by shareholders whose money was invested in securities quoted on the London Stock Exchange, and relating to undertakings in Latin America. The average return remains small, but the upward trend may afford some additional ground for hope from the South American field after the war, when Latin America may be the only large block of territory not seriously ravaged by world wide conflict. Of the total amount of £910,598,088 of British investments in Latin America, quoted on the London Stock Exchange at the end of last year, the amount paid for dividends or interest was £21,124,441, or an average of 2·3 per cent., which compares with 1·9 per cent. in 1941. It is necessary to go back to 1931, when the average payment was 3·2 per cent., to find a better return. Even the railway group showed a slight improvement at 1·2 per cent., which compared with 1·1 per cent. for the previous year.

Road Accidents — Britain's Disgrace

Though the deaths from road accidents in 1942 show a welcome reduction on those for 1941, the total of 6,926, including 1,315 children, is higher than could reasonably have been expected: traffic was greatly curtailed during the year and there was not the same urge that there was in 1941 to set caution aside in the effort to reach home at nights before the air-raid alarm sounded. A point to be noted is that two out of three child fatalities are caused today by vehicles of the heavy type, lorries or buses, having drivers who are mainly professionals with good driving records. This is not what would be generally supposed, and it seems to throw the onus on those responsible for controlling children. Mr. P. J. Noel-Baker, M.P., Parliamentary Secretary, Ministry of War Transport, has recently pointed out that the deaths from motoring accidents since the war began total 26,000 and exceed by 10,000 all the deaths due to enemy action among British seamen in the Merchant Navy. Why, he asks, does the public stand it? What would they say if, every fortnight right through the year, we had a railway accident in which 300 passengers were killed? Similar questions are being asked in America where the figures are even worse. Towards the end of last year it was estimated that the deaths on American roads for 1942 would reach a total of 28,000, equal to the entire population of a town such as Chelmsford or Taunton. So far as this country is concerned, it is to be hoped that one of the many promised post-war improvements will be a Ministry of Transport inquiry into every fatal road accident. That would give employment to at least 100 Inspecting Officers as compared with only four for the railways. Moreover, the Inspecting Officers of Railways have many other duties to perform in addition to reporting on accidents.

"Merchant Navy" Locomotive Nameplates

Named locomotives, like clean and well-kept locomotives, make a great appeal to the public, and the nameplates borne by the ten "Merchant Navy" Class locomotives of the Southern Railway which are illustrated on p. 170 will prove attractive to many. It has been suggested in some quarters that under war conditions an austerity finish should be given to everything and all ornament should be eschewed, but in this matter of naming engines and providing them with badges, the Southern Railway is following the practice of the Army itself in relation to tanks. A name has great value psychologically and it is important as an aid to memory. Among the initiated it is, moreover, a useful form of shorthand. Every locomotive engineer envisages a lengthy technical description directly there is spoken to him one of the following names: *King Arthur, Gladstone, Remembrance,* or *Channel Packet*. The "Merchant Navy" Class locomotives are named after the great shipping lines using the port of Southampton, but in present circumstances the engines cannot be used for hauling ocean expresses to cater for the Southampton passenger traffic; they are, however, in profitable and essential employment as mixed traffic engines hauling express goods trains and are giving very satisfactory results.

War Advance Claim by Senior Railway Staff

The article on the above subject in our issue of January 22 has produced some further interesting correspondence in this and last week's issues from railway officials, expressing their support for the views expressed. It would seem that we have understated the case which the Treasury had to consider. Commensurate with responsibility, it is considered that the financial position of the officers of a railway company compared with the civil service is low; and as to the duties (executive and directional) undertaken by the higher railway officials, their reward in comparison with the civil service becomes even more unfavourable. One of our correspondents writes: "Were certain of the higher officials of the civil service carrying the same responsibilities as, for instance, district and divisional Officers of the railway, they would be eligible for the very highest rank for pay and so forth. Moreover, the recent Honours List was noteworthy, as much for the exclusion of senior railwaymen as for the inclusion of civil servants." Another correspondent, whose letter is published on p. 162, makes the interesting point that during the depression periods the senior staff accepted a percentage reduction in common with all other railway staff. Thus different treatment is being meted out when war advances are being given to that prevailing during the period of trade depression.

American Subsidiary Lines

In the United States the railway position in general is greatly complicated, not merely by the very large number of railways which maintain, or appear to maintain, a separate existence, but also by the control exercised by certain of the larger lines over a considerable number of subsidiaries, whereby the larger systems concerned are, in effect, railway groups of very wide extent and influence. Best-known of such groups, probably, is the New York Central System, in which the original New York Central & Hudson River Railroad, having absorbed the Lake Shore & Michigan Southern and other companies, obtained control over the Cleveland, Cincinnati, Chicago & St. Louis (the "Big Four"), Michigan Central, Boston & Albany, Ohio Central, and Pittsburgh & Lake Erie to form a network of 11,173 route miles. Of these the last-named is still operated independently of, though by means of majority stock holding under the control of, the parent concern. Of other companies, the Atlantic Coast Line has as subsidiaries the Atlanta, Birmingham & Coast, and the Louisville & Nashville, and the latter in its turn controls as subsidiary the Nashville, Chattanooga & St. Louis, though in this case all four are independently operated. Then there are important inter-railway links such as the 116 miles of the Richmond, Fredericksburg & Potomac Railroad, forming the main artery between Washington and Richmond, over which passes all the busy traffic between the Pennsylvania and Baltimore & Ohio Railroads, on the north, and the Southern, Atlantic Coast, and Seaboard lines, to the south-west and south; though independently operated, the R. F. & P. is jointly controlled by all five companies. In addition to these major controls, there are innumerable smaller concerns forming a part of the financial structure of the larger companies, and as mentioned on p. 165 efforts are now being made by the Santa Fe and Erie Railroads to effect complete mergers of as many of the former as possible.

The Mexico-Guatemala Bridge

Attention has been directed in the American press to the importance as a link in overland communications in Central America of the new international railway bridge across the River Suchiate, between Mexico and Guatemala. The need of this rail link has increased greatly as a result of wartime interruption to shipping traffic. The town of Suchiate is in Mexico, and is the terminus of the standard-gauge railway system of the Mexican National Railways, which have financed the emergency completion of the bridge; it is crossed by standard-gauge railway tracks. Ayutla, on the Guatemalan bank of the river, is the northern terminus of the narrow-gauge system of the International Railways of Central America. Goods cross the bridge in Mexican railway wagons and are transferred from one railway to the other at a 300-ft. covered transfer platform at Ayutla, which has a narrow-gauge line along one side and a standard-gauge line along the other. Until the opening of this bridge it was necessary to unload all freight at Suchiate and to transfer cargoes by lorry or ox-cart to the river bank, where it was loaded on small barges with the maximum capacity of 2,500 lb. for ferrying across the river and again transferring by ox-cart to

the Guatemalan railways. Three of the boats were owned by the Mexican Government, two by Guatemala, and two by a private owner. The distance between the old terminal stations was nearly three miles; the river is actually 820 ft. across. The new bridge, of creosoted-timber trestle construction, is 1,140 ft. long. Use of the structure as a highway is now under consideration; this would involve laying a solid floor to facilitate the passage of motor vehicles.

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Carbonisation of Locomotive Piston Valves

Most locomotive engineers already understand the phenomenon of carbon-deposit formation on piston valves and have at their disposal remedies which are more or less successful, but there is still something to be gained by comparing experiences and for this reason an article by Mr. J. F. S. MacDonald, A.M.Inst.C.E., A.M.I.Loco.E., having the title of this note and appearing in the December 25, 1942, issue of our contemporary, *The Engineer*, will be of general interest. After pointing out that even the hottest of superheated steam could not carbonise lubricating oil in the absence of atmospheric oxygen, the author expresses the conviction that deposits result from the passage of flue gases and ashes down the blast pipe while the engine is drifting. Confirmatory evidence in support of this theory is provided by the deposits themselves, which the author's experience goes to show are thickest in the exhaust passages and which, furthermore, are much less pronounced in engines having snifting valves. It is recommended that snifting valves be invariably fitted and that, in addition, care be taken to avoid firing up when the engine is drifting. Limitation of the supply of oil to the cylinders by careful setting of lubricators is considered important and the author gives the feeds in drops per minute for engines of different sizes under varying conditions.

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Small Wheels and Track Stresses

The introduction of express diesel-electric locomotives of the multi-bogie types, and of very large tenders for high-speed steam locomotives, has focussed attention in recent years on the fact that even where there is no balance weight, and the wheel is completely balanced centrifugally, the stresses in the track may rise to inconveniently high values if the wheel diameter is small. Some tests with a double-unit diesel-electric locomotive running at 60 m.p.h. on straight level track showed that the leading wheel, when loaded to 48,600 lb., gave a vertical stress in the base of a 110-lb. flat-bottomed rail averaging 13,500 lb. per sq. in., with a maximum stress of 16,000 lb., and the other wheels gave somewhat less. At 100 m.p.h. the stresses from both front and back wheels, loaded to 48,600 and 49,500 lb. respectively, were over 16,000 lb. as a maximum, and 13,500 to 14,500 lb. as an average. Over the same stretch of track some tender wheels loaded to 66,700 lb. showed average stresses of 12,000 to 13,000 lb. per sq. in. and maximum values of 17,500 lb. at 60 m.p.h.; at 100 m.p.h. the maximum stress was 19,500 lb. per sq. in. and the average 15,000 lb. Round a 5-degree curve at a speed of 45 m.p.h. the diesel-electric locomotive produced a maximum stress in the high rail of 25,000 lb. per sq. in., and 18,000 lb. in the low rail. The tender wheels produced 35,000 lb. per sq. in. as a maximum in the high rail and 22,500 lb. in the low rail. The respective averages were much less, being only 15,000-20,000 lb. for the diesel-electric and 18,000-26,000 lb. for the steam locomotive tender wheels.

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American-Built "Austerity" Locomotives

Few locomotive types can have had their portraits taken so often in so short a time as the American-built "austerity" engines we described in our December 11, 1942, issue. The striking appearance of these engines, coupled with the fact that they are symbols of an international friendship of immense historical significance, causes them to be the focus of great interest wherever they go. On p. 169 of this issue we publish a side view of the new locomotive; (also a diagram giving the weight distribution and the principal dimensions.) We understand that the new engines are already proving their value on British railways. In course of time they will no doubt earn for themselves the tribute which enginemen in this country nearly always pay to notable new classes and be given a nickname expressive of their qualities and of the sentiments they have inspired. We have as yet no inkling of what this nickname is likely to be, but in an American journal the legend beneath a picture of one of the class described it as "an iron doughboy in battledress." This, to use another American expression, is something of a bibful and we feel sure that our men will soon improve on it with a name both terse and apt.

Agreed Charges

THE pressing demands for the concentration of manpower on tasks immediately connected with the prosecution of the war have naturally caused traders, in common with Government departments, to seek methods of conserving labour. In this connection it seems probable that the principle of agreed charges for the conveyance of traffic by railway which was authorised by the Road & Rail Traffic Act, 1933, will be more extensively adopted in future than it was under pre-war conditions. As already explained in these columns, all the principal Government Departments have now agreed with the railway companies flat rates per ton for the conveyance of their traffic, irrespective of the distance it travels, thus enabling all concerned to effect valuable economies in clerical and accountancy operations. Technically, these flat rates are not "agreed charges" within the meaning of the 1933 Act, as the Minister of War Transport in January, 1942, relieved the railway companies, for obvious national reasons, from the necessity for securing the approval of the Railway Rates Tribunal as is essential in the case of charges "agreed" with traders.

During 1942 nearly 600 agreed charges with traders were approved by the Railway Rates Tribunal, but this number will be substantially increased during the next few weeks by reason of the Order issued by the Minister of War Transport which, while directing that on and after January 1, 1943, no traffic should be accepted for conveyance by merchandise train unless it is consigned "carriage paid," temporarily exempted returned empties and completely exempted traffic to which an agreed charge has been applied or is applied in future. In the case of returned empties, the Order provided that they might be accepted consigned carriage forward if they are intended for one of the firms or persons shown in the list contained in the R.C.H. Special Instructions relating to Goods, Mineral, & Livestock Traffic, more commonly known to all railwaymen as the "pink pamphlet," and also on condition that the consignee made an application to the railway company before January 31, 1943, for an agreed charge to be applied to the empties. If an agreed charge is arranged and approved by the Railway Rates Tribunal, empties can then continue to be accepted for conveyance carriage forward, but if the railway company should decline to grant an agreed charge, the facility of sending the empties carriage forward ceases on the date the agreed charge is declined by the company. The list in question contains the names of something like 5,000 firms and several hundreds of these have already approached the railway companies for agreed charges so that they can retain the right to have their empties consigned carriage forward. As traffic to which an agreed charge applies is specifically exempted from the provisions of the carriage paid Order, it is almost certain that an additional number of firms will apply for agreed charges to be arranged for their traffic, in order to retain the advantage of the carriage forward facility, while the growing pressure of man-power difficulties may well cause other firms to seek to take advantage of the savings which the adoption of this principle affords.

In 1937 it was estimated that the agreed charges then in operation represented a gross railway revenue of just over £4,000,000. If, as is expected, a fairly large number of additional firms seek the application of these charges to traffic other than returned empties, the gross revenue earned from this method of charging may well be substantially higher in future. A good deal of clerical labour is required for the calculation and fixation of an agreed charge and obtaining its approval by the Railway Rates Tribunal. Before the war it was the practice to calculate the whole of a trader's conveyance charges by all forms of transport for a representative period in order to arrive at an average figure per unit.

This average might be slightly adjusted to allow for various considerations, but when the figure had been agreed and approved, both the railway company and the trader secured appreciable savings in clerical and accountancy costs—the balance of advantage in this direction is with the trader, and the consideration to the railway company was that of retaining and regaining traffic to the railway. An essential feature of agreed charge arrangements is that the charge is recalculated from time to time in order that it may be adjusted if necessary to make allowance for alterations in the average length of haul or in the nature of the traffic. With the reduction in alternative means of transport occasioned by the war, the desirability of the railways using the agreed-charge arrangement as a means for retaining and regaining traffic does not now apply, but both they and the traders are being affected in a growing degree by manpower difficulties, and the agreed-charge system offers considerable scope for economies in this direction. It may well be that by the end of the war such a substantial proportion of traffic

will be conveyed under this arrangement that, when normal conditions return, it may have a material influence on railway charging methods, particularly as in the case of the Service Departments flat rates have also been agreed for passenger fares.

Railway Assessments

THE work of the Railway Assessment Authority in estimating the net yearly value of each of the undertakings of the four amalgamated railway companies for insertion in the draft of the Third Railway Valuation Roll (operative for the five rating years from April, 1941, to April, 1946) has been made difficult by war conditions. The companies held views on certain important points which differed from those taken by the authority, and it was felt that, in present circumstances, the conflicting views of the parties ought not to be allowed to become subjects for litigation if this could be avoided. The parties therefore, have discussed the points of difficulty from time to time, and the result of their discussions has been the elimination, as regards the roll in question, of further controversy between the authority and the companies in respect of the *cumulo* net annual values to be inserted in the draft roll. These values are G.W.R., £1,631,068; L.M.S.R., £1,747,573; L.N.E.R., £1,281,553; and Southern Railway, £1,339,806; making a total of £6,000,000. The total of the *cumulo* net annual values settled for the purposes of the Second Railway Valuation Roll (operative for the rating period 1936-41) was £5,150,000; the increase in total thus is one of approximately 16½ per cent.

It is recognised mutually that, if the issues between the parties had had to be the subject of litigation, the companies would have contended for lower figures, and the authority would have contended for higher figures, than those given above; and so it is explicit between the parties that the figures now to be inserted in the third roll, or the fact of such figures or any other figures having been discussed by the authority and the companies, shall not be used at any time or for any purpose hereafter, or alleged as being relevant, on the settlement of the net annual values to be inserted in any subsequent roll, or in any proceedings or negotiations thereon or relative thereto, and that no argument or inference shall be based on, or drawn from, the figures in the third roll or any correspondence relative thereto.

The authority is proceeding to bring out drafts of the various parts of the third roll, embodying in it the above-mentioned *cumulo* net annual values and apportioning, in accordance with the apportionment scheme, each of these net annual values among all the railway hereditaments occupied by each company throughout the country. It does not follow, of course, that the new figures for each rating area will be in exact ratio to the general increase of 16½ per cent. It is hoped that the roll will have been completed before the end of this year and that the resulting assessment will have been carried into the local valuation lists with retrospective effect, for rating purposes, to April, 1941.

There have been similar discussions between the authority and the London Passenger Transport Board about the *cumulo* net annual value of its "transport undertaking" (that is to say, its railway, tramway, and trolleybus properties) for the purpose of the draft of the Second London Passenger Transport Roll which operates for the same rating years (1941-46) as the Third Railway Valuation Roll for the main-line companies. The result has been a mutual acceptance of the figure of £850,000 (the net annual value fixed by the Railway & Canal Commission for the rating quinquennium 1936-41 was £945,270). This roll will be prepared as quickly as possible during the course of this year.

Railway Pensions in Argentina

THE Argentine Congress has recently sanctioned a number of important modifications to the railway pension law. The beneficiaries will be allowed less favourable superannuation conditions than heretofore and they will pay more for them. The industries which use the lines will be called on to pay increased charges. Perhaps the most striking innovation of all is the fact that, for the first time, the Argentine Government will implement its guarantee of the railway pension fund by contributing no less than $10,000,000 m/l.* year from the national exchequer during the next seven years. Although the sum is to be applied to a specific purpose, it is, in effect, the payment of a subsidy to the railway industry of the country. Contributions to staff pension funds are an integral part of the operating costs of a transport undertaking and the fact that the Government has had to come to the aid of the railways to prevent the collapse of the fund discloses that the industry has ceased to be self-supporting.

The original scheme could be described only as ultra-generous. The normal retiring age was 50 and, provided that the beneficiary had completed 30 years' service, he was entitled to receive a pension according to a scale which varied from 95 per cent. of the average wages received during the last five years in the case of the lowest grades, up to 75 per cent. of the average pay in the highest grade. The maximum salary carrying pension rights was $1,000 m/l. a month, that is, the recipient of an average salary of $1,000 m/l. or more a month received a pension of approximately $750 m/l., equal, at present rate of exchange, to about £44 a month. There were also disability pensions for those whose health failed prematurely. However, from an actuarial standpoint, the scheme presented two unusual characteristics. Not only was the worker himself entitled to receive a pension at the surprisingly early age of 50, but, in the event of his demise, either before or after retirement, his widow continued to receive half the amount of his pension during the remainder of her lifetime, plus an additional percentage for each dependent child until it became self-supporting. The fund relied for its income on (1) contributions from all employees of 5 per cent. of their salaries and wages; (2) a contribution from traders of an amount equivalent to 8 per cent. of all salaries and wages, which was collected by the companies by means of a percentage surcharge on the amount of all goods invoices; and (3) the transfer to the pension fund of all unclaimed over-charges of freight, which had formerly remained the property of the companies.

At the time of the approval of the law, it was clear that it was actuarially unsound, but the power of politics prevailed over actuarial calculations and the scheme was put into operation, with the guarantee of the Argentine Government. It was some time before machinery could be set up to administer the fund, but the contributions commenced immediately after the passing of the law, which enabled a considerable capital sum to be accumulated and invested in Argentine Government bonds. The existence of this fund allowed the Pensions Board to continue to function long after yearly outgoings exceeded income. Year by year, the growing seriousness of the position was revealed in the annual reports issued by the Pensions Board and in 1941 income amounted to $54,390,401 m/l. and expenditure reached the startling figure of $83,881,290 m/l., leaving a deficit of $29,490,889 m/l. for the year.

The amendments in the law, as recently approved by Congress, will improve the financial position, but, in the absence of further information, it is not possible to form a reliable opinion as to whether the new basis is actuarially sound. So far as the workers are concerned, they will be required to remain at their posts until the age of 55, instead of 50, and all pensions will be lowered by about 8 per cent. In future, 32 years' service will be required to qualify for full pension, against 30 years formerly, and the amount of pension will be calculated on the average salary during the last 15 years, instead of the last 5 years. Apparently, pensions for widows and dependent children will continue as heretofore, regardless of the actuarial expectation of life of the wife at the time of the husband's demise. One has only to visualise the by no means unusual case of a railwayman of comparatively advanced age who marries a woman appreciably younger than himself to realise how serious is the burden of charges of this kind on the finances of the fund. In addition to the scaling down of benefits, all workers will contribute 8 per cent. of their salaries and wages, instead of 6 per cent. (originally 5 per cent.) which, coming, as it does, at a time when the cost of living in Argentina is rising, may well provoke insistence on higher wages. Indeed, applications have already been filed on the men's behalf. The users of the railways are also to become parties to the resuscitation of the railwaymen's pension fund. In future, traders will contribute by means of supplementary freight charges a sum equivalent to, not 8 per cent. but 12 per cent. of the men's wages. The percentage surcharge which will be necessary to enable this sum to be accumulated has not yet been divulged, but it would seem that, with Argentine export trade so severely decreased through the war, the surcharge will have to be substantial if the much diminished volume of traffic is to yield an amount as much as 50 per cent. greater than was formerly received. Yet, even after both railwaymen and traders have considerably increased their contributions, it will still be necessary for the State to subsidise the fund with a yearly grant of no less than $10,000,000 m/l. during the next seven years.

The decision of the Government to subsidise the fund from the national exchequer, in preference to raising railway rates still further, suggests that the maximum charges which the traffics will bear have been reached—an ominous outlook, particularly from the railway stockholders' point of view. For a long time past, the companies have pressed the Government for

* "m/l = moneda legal" or legal money, that is, paper pesos

permission to raise their rates to meet the heavy burden of rising working costs, particularly fuel and materials, and to offset, in some measure, the serious exchange losses incurred in remitting their peso net receipts to London. Hitherto, their appeals have been in vain and if the Government now takes the view that higher rates and charges are economically impracticable, shareholders' prospects are far from encouraging. Nevertheless, however unfavourable the present economic position of the railways, the fact should not be overlooked that prevailing conditions are abnormal in many important respects. Given a return to world peace, there will be a material change for the better in Argentina. With the resumption of normal exports to Europe, railway traffics will expand and fuel and material costs will decrease. Some reduction should then be possible in the surcharge which traders have to bear. Nevertheless, assured though the future may be, social legislation in Argentina appears to be in advance of world economic conditions. Clearly, the railway workers have set up for themselves privileges and social conditions which are not only beyond the reach of sister industries in the same country, but quite unattainable by transport workers in other parts of the world. Argentina depends for her prosperity on exports to Europe and it is difficult to believe that the stricken nations on this side of the Atlantic will be in a position to pay the high prices for meat, wheat, maize, and other Argentine products which alone will permit the producers to support a railway industry offering conditions of service and pensions unequalled in any of the countries where exporters will hope to find buyers. Meanwhile, the taxpayer in Argentina is called on to bear the burden.

Maintaining London Transport Track

THE permanent way maintained by the London Passenger Transport Board consists of 503 miles of single track, of which 312 miles are in the open, and 191 miles in tubes or other tunnels, where men can enter only when traffic is not in operation. Problems of maintenance are unusually complex and severe, as a heavy service of electric trains is worked for approximately 20 hr. out of 24. Even on open sections of the line, therefore, all major work, such as re-laying, re-railing, re-sleepering, and repairs to junctions, may be effected during the short non-traffic period. On the tunnel track all inspection and minor maintenance such as tightening keys and fastenings must also be undertaken at night during the brief period of "engineers occupation" varying on different sections from 3 to 5 hr. The operation of a frequent service of electric trains causes heavy wear and tear on the track, necessitating frequent repairs and renewals, a rigid system of inspection, and maintenance to a very high standard. The difficulty is aggravated by the necessity of severe acceleration and braking so as to reduce to the minimum the scheduled times of trains. This can be obtained with the older type of rolling stock only by ensuring a certain degree of roughness of tyre and rail, resulting from the use of cast-iron brake blocks. Although this roughness is desirable for good adhesion, it has a grinding action on the rail and produces battering and corrugation on curves and on lines approaching or leaving stopping places. On the newer stock, motors are distributed throughout the train, thus improving the ratio of adhesive weight to total weight, which makes it possible for the cast-iron brake blocks to be replaced with non-metallic blocks, with great advantage to the life of rails and tyres.

So materially have traffic delays been reduced by scientific study of the causes, that the average total delay to trains due to any permanent way defect is under 5 min. a week. The permanent way relaying and section gangs book on at 11.30 p.m. There is a regular night staff of 420 for the tunnels, supplemented by a further 100 for major work on the open sections where maintenance is undertaken during the day. There is also a women's gang, numbering 15, under a male ganger and sub-ganger. Four specialist gangs deal with the conductor rails. Switching off the current, the first step in the process of night permanent way work, is indicated visually by current-rail indicator-lights. The restoration of current on the tube sections, at the close of the job and at a scheduled time, is effected by the section ganger giving a written certificate to the sub-station attendant that everyone is clear of the line; not until this is received is the order given to switch on. If the gang is a little behind time in finishing, the ganger will arrange for the current to be withheld. In this event, he will be called upon to give detailed reasons for the delay.

Originally the London tube tunnels were laid out for circular curves tangenting on to the straight, but the use of transitioned curves has now been introduced as extensively as clearances will permit. Moreover, in recent years, some new construction work has been undertaken in the form of modifying the sections formed by tunnel segments, giving greater clearance to facilitate the installation of transitioned curves. Sleepers on tube tracks have been concreted in to prevent any possibility of movement under traffic; as the clearance is so restricted that absolute fixity must be achieved. Concrete work is carried out by a wagon on the spot, fitted with a concrete mixer. Shrinkage of sleepers is dealt with by packing the chair with elm. Such packings are limited to $\frac{1}{2}$ in.; beyond that point it is necessary to realign the levels of the track. This process involves the breaking out of existing concrete, removing old sleepers and replacing them with new where required, wedging and packing to the desired level, and thereafter, by degrees, night by night, properly grouting, and concreting it again. The centre portions of the sleeper bays are not concreted but filled up with $\frac{3}{4}$ in. limestone, for with these fillings the reflection of noise as between train and track is reduced. The method is also cheaper, more economical for subsequent alterations, and prevents the sleeper from being centre-borne. It has become the standard for the tubes. The men have but some $3\frac{1}{2}$ hr. to carry out each operation in the process of relaying or reconditioning the track to a new line and to new levels. Existing wartime possessions allow for approximately four lengths of 60-ft. rails to be dealt with on a Saturday night; this commonly entails nine preparatory nights, two nights for unloading the ballast train and re-railing, and one night for the complete re-sleepering of the track. The next week is occupied in concreting the track.

Before a job at a tube station can be begun, arrangements are made with the Operating Department for the use of the station platform, and for the removal of the bunks provided for air-raid shelterers. The tube gangs have their own special methods of handling rails and sleepers. For rails in Tubes it has been found more economical to use such equipment as the Morris tackle, four to the 17-cwt. load of a 60-ft. length of rail, with the tackle chain attached to the tunnel segment bolts. With this tackle it is possible to renew 320 yd. of single rail in $2\frac{1}{2}$ hr. Spotting cracks in rails develops keen eyes among the men, for the one who finds a fine crack receives £1. The discovery of obvious fractures is not so rewarded; indeed, the man who fails to discern one before it reaches that state usually receives quite a different kind of mention! London Transport is particularly concerned with the necessity for preventing vibration to adjoining property, and corrugated or battered rails therefore receive special treatment. There is a portable grinding machine which can be used on the site for dealing with rough rails, and a train has been fitted with abrasive blocks. These devices on the site are adapted for dealing with corrugations only. To remove the larger quantity of metal necessary to eliminate battering, a horizontal grinding machine has been designed and installed at the main Lillie Bridge Depot. This machine is the first of its kind in the world. For the protection of rails against side wear, corrugation, and battering, oil boxes are used to a markedly greater extent than on other lines. Incidentally, canteen facilities have been so improved since the war began that it is now possible for any man in a section gang or extra gang to obtain a hot meal from a canteen, whether on a day or a night shift.

DISTRIBUTING PASSENGERS EVENLY.—Peacetime publicity for certain routes and trains can prove so effective as to be an embarrassment in war. This is the case in the United States, where as yet the timetables show but little variation from those in operation before the war, whereas the demand for accommodation is enormously increased. Efforts are now being made to secure a more even distribution of passengers, and the travelling public is being urged to realise that it will probably travel with less inconvenience and discomfort if it is prepared to forsake the more popular trains and routes for others which have not been boosted to the same degree by advertising in the past, and are therefore less well known and less crowded. It is also pointed out to the American public that 21 per cent. of the tickets sold are for journeys on Saturdays, and 51 per cent. cover journeys on the three days from Friday to Sunday inclusive, leaving only 49 per cent. to be spread over the remaining four days of the week. The result is that numerous excellent trains still run in almost all parts of the country with some empty seats and berths, whereas the more popular trains and routes are badly overcrowded. In two years United States passenger travel has increased by 106 per cent. but this increase has varied considerably according to region. In the North-West the addition has been 51 per cent., in the Central Eastern States 81 per cent., in New England 89 per cent., in the Middle West 110 per cent., and in the South and South-West Regions as much as 224 and 239 per cent. respectively.

LETTERS TO THE EDITOR

(The Editor is not responsible for the opinions of correspondents)

War Advance Claim by Senior Railway Staff

73, Green Curve, Banstead,
Surrey
Feb. 3

TO THE EDITOR OF THE RAILWAY GAZETTE

SIR,—I was interested to read the article in your issue of January 22 and, as one of the senior staff concerned, entirely agree with the sentiments you express. The question is one which has caused much feeling among the individuals affected, who feel that they are being made the victims of an unfair discrimination. Although an unassailable case could be made to show that additional costs due to wartime conditions have fallen quite as heavily on the senior railway staff, it is rather the principle involved which is so disturbing.

There is one rather important point overlooked in your article, to which I should like to draw attention, and that is the fact that in the "depression" periods, spreading over some ten years, **1928-1930** and **1931-1937**, the senior staff accepted a percentage deduction in common with all other railway staff. (The deduction in respect of the senior staff actually worked out over the whole period at a slightly *higher* percentage than that applied to the remainder of the staff.) The different treatment meted out when deductions were being made compared with that which obtains when war advances are being given, is obvious. The only consistency is that in neither case do the senior staff apparently have any say in the matter!

Yours faithfully,

W. CHAS. BOLTON

Feb. 3

TO THE EDITOR OF THE RAILWAY GAZETTE

SIR,—Everyone with an intimate knowledge of the railway service is aware of the long and specialised training period passed through before positions of higher authority are reached. It is common knowledge, too, that most of the other commercial concerns pay their higher administrative and technical staffs a better rate of remuneration than is given to railway officers occupying positions of great responsibility.

The railways are still commercial concerns, though temporarily under Government control. The conditions of service of the railway staffs have not been altered, and it seems an injustice to those in receipt of salaries over **£500** a year that the Treasury should oppose the concession of a war advance, which has already been granted to the lower paid staff.

It appears somewhat anomalous that, although in many respects the Civil Service staff enjoy better conditions than the railway staff, it has not been considered necessary previously to make comparison between them. The majority of the more highly-placed railway officers have to be available at all times during day or night under present conditions, and their work and responsibilities have been increased to a very large extent as a result of the war.

Complete and whole-hearted loyalty to the organisation is in the make-up of those occupying positions of authority on the railways, but this affords no justification for the fact being overlooked that the incidence of taxation bears more heavily on them than in the lower paid grades.

Yours faithfully,

JUSTICE

Feb. 6

TO THE EDITOR OF THE RAILWAY GAZETTE

SIR,—The prominence that you have given to this matter in the articles in your issues for January 22 and February 5 will have earned the gratitude of many besides myself. May I suggest that members of the senior staff of the British railway companies should bring this matter to the attention of their local Member of Parliament. The best method of doing this would be to send copies of your two articles to the Member of Parliament concerned.

If you have no objection to such action, perhaps you will kindly publish this letter so that as many as possible can act together in the same manner.

Yours faithfully,

L.N.E.R. ELECTRICAL

Old Midland Railway Services in London

60a, Green Lane, Northwood, Middlesex
Feb. 3

TO THE EDITOR OF THE RAILWAY GAZETTE

SIR,—Those who like myself are interested in the details of obsolete services must appreciate the full particulars of the Midland service to Richmond given by Mr. Stewart Haram in your issue of January 22. In the summary of the subsequent operations on the Child's Hill—Stonebridge Park section, January **1**, **1893**, is given as the date of the re-opening of one of the shuttle services. *Bradshaw* does not show the service as commencing till March of that year. In which month did it begin?

More important, however, is the date given of the final withdrawal of the passenger service as October **1**, **1904**. Surely this should be **1902**. *Bradshaw* for October, **1902**, and for the three months following, has a special notice that the service has been discontinued, and I cannot trace any revival.

It may be of interest to add that during the summer service of **1905-1908** inclusive, the line was used by the through fast train from Southampton and Portsmouth to Leicester and beyond. The train ran non-stop from Richmond to Hendon worked by an L.S.W.R. engine, with a corresponding working back from Hendon.

Yours faithfully,

REGINALD B. FELLOWS

Jan. 3

TO THE EDITOR OF THE RAILWAY GAZETTE

SIR,—It may appear strange to some of your readers that the Midland Railway made several efforts to cultivate services from its system to various places in the London district *via* the *first* Midland & S.W. Junction Railway.

The long and acute competition to convey coal to London, between the Midland, Great Northern, and other railways of the late "sixties" of the last century was one of the chief causes of these efforts. At that time coal in London south of the Thames and in western suburbs was about 5s. a ton dearer than in other parts of the metropolitan area.

The Midland and G.N.R. each carried immense quantities over the Met. "widened lines" to the L.C. & D.R. as soon as this through route became available; and the Midland in particular planted coal depots on the L.C. & D. system in transpontine London and suburbs. These depots, however, left the district west and south-west of Clapham Junction devoid of such depots.

In **1864**, only one year after the Midland Railway obtained powers to extend to London, that railway was authorised to construct a line, 4 miles in length, from Brent, near Hendon, to the North & South Western Junction Railway at Acton Wells. The construction of this line provided the Midland with connections in the Kew district with the L. & S.W. system. The Midland from October **1**, **1868**, leased *this* M. & S.W.J.R. at a rent of **5** per cent. on the amount of the debentures and share capital, and soon after purchased the line outright.

In **1869**, the L. & S.W.R. made a connection with its recently opened Kensington—Richmond line, from South Acton (N. & S.W.J.R.) to Gunnersbury. The L. & S.W.R. in **1871** gave up its share in the ownership of the N. & S.W.J.R., and was succeeded by the Midland. The rights of the L. & S.W.R. over the joint line and the branch to Brent were secured. The Midland was thus able to work goods and coal trains over the Hammersmith branch of the N. & S.W.J. line.

The Metropolitan District Railway in **1873** was authorised to extend its line to Hammersmith Broadway. The next year the Midland deposited a Bill for a railway from a junction with its line from Brent, at Acton Wells, to the Metropolitan District line at Hammersmith, authorised in **1873**. The G.W.R. opposed this Bill, on the grounds that it was a breach of a mutual agreement with the Midland that neither would promote a Bill for a railway into the territory of the other.* The House of Lords threw out this Bill.

In **1875** the Met. District obtained an Act to extend the authorised line to Hammersmith to a junction with the L. & S.W.R. (Studland Rd. junc.). This **1875** Act included an agreement between the Met. District and the Midland, that the former would construct and complete the Hammersmith Junction as a separate and distinct undertaking with all convenient expedition and that on its completion the Midland should have running powers over the District line connected with the Hammersmith Junction undertaking, subject to tolls; the receipts from all sources of traffic over the junction section to form a fund, out of which the District was to receive the cost of maintenance and a sum equal to 4½ per cent. per annum on the paid up capital of the Hammersmith Junction, the balance

* The Great Western was already at Hammersmith as joint owner with the Metropolitan of the Hammersmith & City Railway

of the fund to go to the Midland. The line was opened on June 1, 1877.

The Hammersmith Junction Bill was strenuously opposed by the G.W.R. and L. & N.W.R. As a result of this opposition a clause was inserted in the Act that the Midland Railway and L. & S.W.R. should not have running powers over the Metropolitan District to Mansion House until a separate bay had been provided for each of these railways at the Mansion House Station. These bays were never constructed.

The result of all this manœuvring to the Midland was largely "dead sea fruit," but that railway was enabled to construct a coal and goods depot at West Kensington, a coal depot at High Street Kensington, exercise running powers to Earls Court, etc. I believe also that the Midland had an interest in the land near Earls Court which later was developed for exhibitions, etc.

Yours faithfully,

G. A. SEKON

Compound Locomotives

1584, Avenida Sayago,
Peffarol, Montevideo, Uruguay Dec. 7

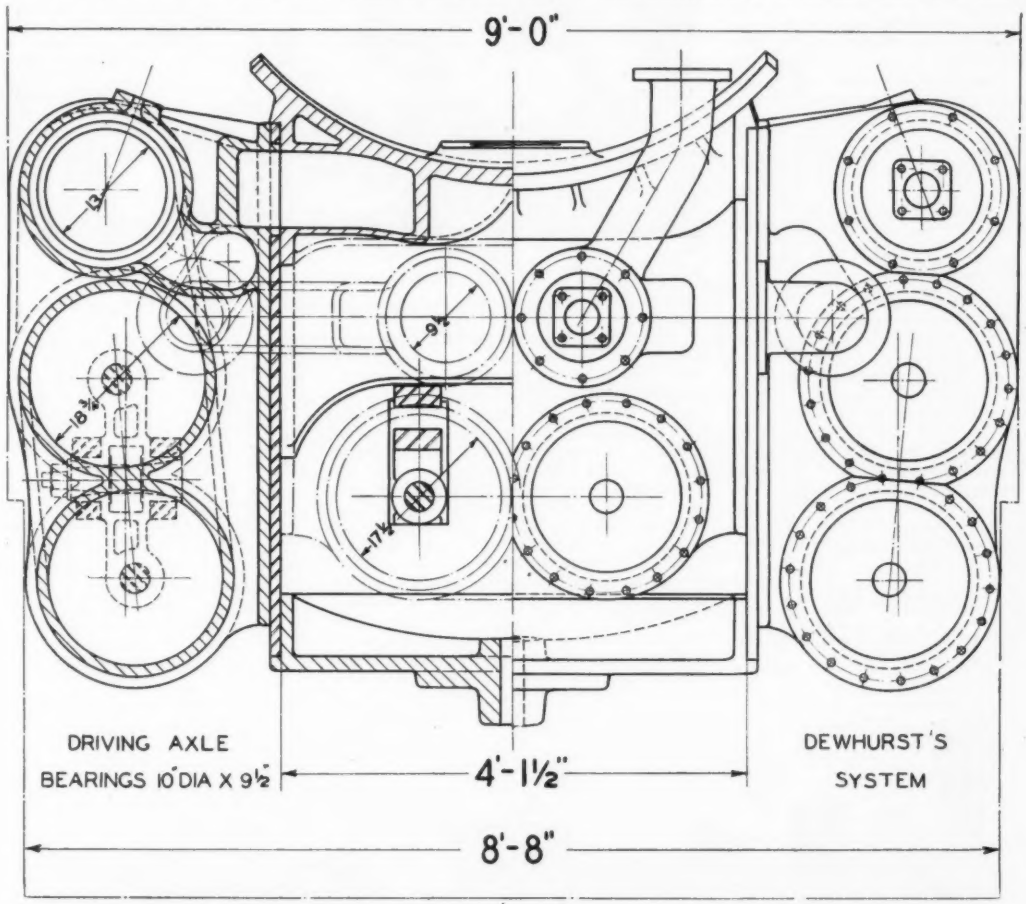
TO THE EDITOR OF THE RAILWAY GAZETTE

SIR,—The first part of the article "An Alternative to Compounding," by W. A. Tuplin, in THE RAILWAY GAZETTE for September 25, just to hand, is very interesting and the subsequent section is awaited with expectation; this letter, however, does not deal with alternatives to compounding but is to point out that the supposed impossibility "to build a British compound locomotive with power comparable to that of the simple existing engines," frequently cited from time to time and forming the motive for the devices suggested in the article, is not strictly correct.

The present writer pointed out in the technical press so long ago as **1933** that it was possible to accommodate a high-powered compound within the British loading gauge by the adoption of pairs of super-imposed low-pressure cylinders outside the main frames. It has since been stated that amongst other difficulties the provision of sufficient axle-box bearing area is impracticable; it is, however, possible to build a locomotive of equivalent power to the L.M.S.R. "Coronation" class—and hence of greater power than the Great Western Railway "King" class locomotives taken as the basis in Mr. Tuplin's article, whilst conserving necessary bearing-areas and all other structural features.

At the beginning of **1942**, when this "compound or simple" question suffered its last periodical resuscitation, the writer got out in some detail and sent to England an application of his solution of the problem adapted to an L.M.S.R. "Coronation" type but enemy action or other war difficulties have delayed its appearance although by the time this letter is published it may have appeared in the home technical press. The principle can, of course, be applied in quite a variety of ways depending on the type and general layout of the locomotive and the various longitudinal locations of the cylinders etc.

It is naturally recognised that the radiation losses in two cylinders of equivalent area to a single cylinder are a disadtage, whilst in the particular application to a "Coronation" or "King" type locomotive there is also some disadvantage in the distance which the low-pressure steam has to travel, but in both these cases low-pressure steam is in question and, therefore, the radiation disadvantages may not be so great in practice. In the arrangement mentioned it is only necessary to have one set of valve-gear for each side of the locomotive—although two sets per side could naturally be used if desired—and an arrangement having tandem valves reduces the total valve-spindles to two only. The disadvantages of steam access and exhaust egress are lessened when dealing with locomotives having bar frames, because the low-pressure valve can be located in a better position and it is even possible to design a plate frame locomotive in which a good position is also attainable, but the accompanying diagram has been made to agree with the framing and "staggered" cylinders etc. of the "Coronation" or "King" type locomotive.



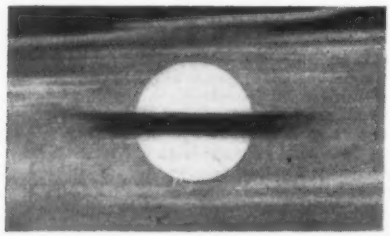
Yours faithfully,

P. C. DEWHURST

The Scrap Heap

THE SUN ADVERTISES L.P.T.B.

On several occasions recently, viewed from Hampstead Heath, cloud effects have given the appearance of a bar across the setting sun, as shown in the accompanying sketch. It resembled the familiar



token of the London Passenger Transport Board which appears on all its announcements and advertisements. We understand that the main-line members of the R.E.C. Publicity Committee have lodged a suitable protest with the L.P.T.B.

Has the sun as a wartime measure changed its advertising allegiance? Some of our readers may recall that in our issues of May 5 and 12, and June 16 and 23, 1939, there was an entertaining correspondence between Mr. Grasemann and Mr. Dandridge concerning the Southern Railway's slogan "South for Sunshine" and the London & North Eastern Railway's rival slogan "Meet the Sun on the East Coast."

* * *

A MATTER OF HISTORY OR 129 YEARS AFTER

Extract from "La France Libre," quoting "l'Oran Republicain."

1789	French Revolution
	129 years after came
1918	German Revolution.
1804	Accession of Napoleon
	129 years after came
1933	Accession of Hitler.
1812	Napoleon's Russian Campaign
	129 years after came
1941	Hitler's Russian Campaign.
1814	Fall of Napoleon
	129 years after came
1943	Fall of Hitler?

Napoleon reigned from 1804 to 1814, 10 years.

Hitler will have reigned from 1933 to 1943—10 years.

It was her last run. Old No. 6 chugged along, covering the four miles of track in 20 minutes, and bringing to an end the once prosperous Schoharie Valley Railroad, in a fertile and historic valley. The railroad's entire personnel of four made the trip: engineer Herbert Brown, fireman Leon Groff, night watchman James Little, and Edward A. Colyer, superintendent & agent. The passing of the 76-year-old railroad brought one happy note. All the steel will be turned in for the war effort—285 tons of second-hand rail, 250 tons of scrap rail; 20 tons of angle bars and pieces, and 160 tons of steel in the bridge over Fox Creek.—*From the "Toronto Evening Telegram."*

The above group seen recently at Paddington Station, G.W.R., indicates the popularity of the baked potatoes now on sale to travellers

The beer bottle now furnishes not only the drink but also the glass from which the brew may be enjoyed. When the shortage of drinking glasses became serious in the Middle East, attention was turned to great piles of empty beer bottles, which could not be returned to oversea breweries because of lack of shipping space. In one locality a small factory began making glasses from beer bottles and is now producing more than 2,000 a day. The top of the bottle is first cut off and then the lower portion is polished. After the cut edges have been smoothed with a blow torch, the lowly beer bottle becomes a serviceable drinking glass. No part of the bottle is thrown away. The British Royal Signal Corps suggested a use for the bottle tops. They are filled with cement into which a peg is fastened and are used by the Signal Corps for insulators on telegraph poles. Even bottles badly broken are salvaged. They are cut near the base, and after the edges have been smoothed they serve as ash trays.—*From "Foreign Commerce Weekly."*

* * *

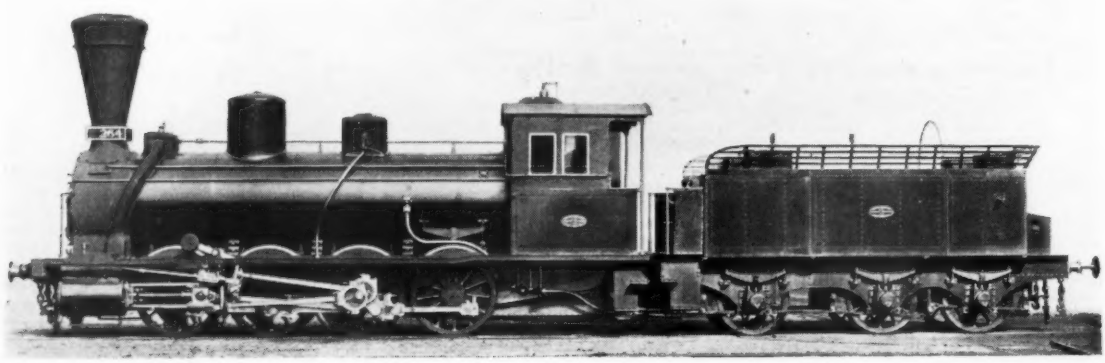
The Southern Railway records substantial increases in the recovery of almost all salvageable commodities during 1942. The principal items were 1,173 tons of waste paper compared with 960 tons in 1941, an increase of 22 per cent. Ferrous and non-ferrous metals (mainly worn-out permanent way rails and chains) amounted to 46,225 tons, as against 40,628 tons, a 14 per cent. increase. Some 130 tons of waste rubber, textiles, rope, and twine were recovered, compared with 78 tons in 1941, equal to 66 per cent. increase.

*

TAILPIECE

Ten locomotives of the "Merchant Navy" Class, each named after a shipping line, are now operating on the Southern Railway.

The sea has tried them, fiercely tested
The ships in sinew, heart, and nerve
And these on land, with sea-names crested,
With zeal and valour also serve.
This naming then was rightly done;
The lines of sea and land are one. E. C.



A locomotive built in 1870 by Beyer, Peacock & Co. Ltd. for the Grand Russian Railway
The cylinders were 19 $\frac{11}{16}$ in. by 25 $\frac{9}{16}$ in.; wheels, 4 ft. 3 $\frac{9}{16}$ in; boiler pressure, 120 lb. per sq. in.

OVERSEAS RAILWAY AFFAIRS

(*From our correspondents*)

WESTERN AUSTRALIA

Government Tramways Results

The financial returns of the Perth tramway system (which is controlled by the Commissioner of Railways, Western Australia) show that earnings for the year ended June 30, 1942, were £402,145, an increase of £68,993 over the preceding year, and that working expenses were £318,000, an increase of £36,793. Interest cost £45,327 (£44,635 in 1940-41), and the balance, after payment of working expenses and interest, was a surplus of £38,818, compared with a surplus of £7,310 in 1940-41, and with deficits of £15,077 and £21,816 in 1939-40 and 1938-39, respectively. Working expenses per cent. of earnings were 79·08 and the percentage of net revenue to capital was 7·43. The number of car-miles run was 4,707,693, and the earnings and working expenses a car-mile were 21·9d. and 17·32d. respectively. The number of passengers carried was 40,868,274, an increase of 6,556,467 over the previous year. 9·27 passengers were carried a car-mile, and earnings a passenger were 2·36d.

The system comprises 17 miles 16 ch. of double track, 17 miles 44 ch. of single track and 13 miles 43 ch. of trolleybus routes. Rolling stock comprises 53 four-wheel, and 68 bogie, trams; 22 trolleybuses; and 13 buses. The number of staff employed on June 30 was 696.

War conditions have had their effect in increasing the patronage of the system; this was marked particularly on the sections operated by trolleybuses.

Basic-Wage Increases

After a recent declaration by the State Arbitration Court that, although the cost-of-living figures for Western Australia indicated that a rise in the basic wage was due, no increase would be granted pending further investigation, the Western Australian Government directed that the basic wage be increased by 4s. 6d. a week. The effect of this increase will be a rise in the working expenses of the Railway Department of approximately £82,000 a year.

CANADA

C.N.R. Oil Interests

Alberta Government officials recently stated that the programme (briefly referred to in THE RAILWAY GAZETTE of January 15), under which the Canadian National Railways are to drill fifty wells in the Vermilion oil fields, Alberta, would involve an expenditure of $500,000. The Vermilion field is about 125 miles east of Edmonton.

A statement issued by the C.N.R. said that it was hoped that the operations would ensure the production of a supply of fuel adequate for the company's purposes in British Columbia. The step, which had been taken at the suggestion of the Oil Controller, and on the advice of Government geologists, had been dictated by the possibility that enemy action might interfere with the delivery of fuel oil for locomotives. It was explained that oil normally reaches British Columbia, by water, through Vancouver, and that the production of oil by the railway would be the most practicable method of securing its position.

The drilling programme will be carried out by a newly-formed C.N.R. subsidiary, Cannar Oils Limited. Locations for the wells have been acquired under an arrangement made with Western Drilling Company. The bulk of the leases are within the already-proven limits of the field. It is believed that two light rotary rigs will be used, with which equipment four or five 1,800-ft. wells could be drilled every month; the rigging and drilling time for one well is from twelve to fifteen days, and additional time is required to equip the wells.

It is reported also that the C.N.R. is negotiating with Vermilion Consolidated for the latter's conditioning plant, which was shut down a short time ago. It is not expected that there will be much delay in completing the present negotiations and in placing the plant back in use.

UNITED STATES

New Works

A length of 12¾ miles of the Mount Rainier National Park branch of the Chicago, Milwaukee, St. Paul & Pacific Railroad is in course of relocation near Elbe, Washington; this work is necessary because of the construction by the city of Tacoma (which is paying for the relocation, at an estimated cost of $349,000) of a large dam on the Nisqually River. The Pennsylvania Railroad has been authorised by the Interstate Commerce Commission to build 12¼ miles of line between Chester and Raccoon Creek, on the borders of West Virginia and Pennsylvania, to serve a war industry; the track will be laid on the existing right-of-way of the Pittsburgh, Cincinnati, Chicago & St. Louis Railroad, and the New Cumberland and Pittsburgh Railroad. The work is estimated to cost $632,000.

Santa Fe and Erie Subsidiaries

To simplify its financial structure, the Atchison, Topeka & Santa Fe has asked permission from the Interstate Commerce Commission to effect a complete merger of eleven of its subsidiaries, including transfer of their properties and equipment; these are the Barton County & Santa Fe; California Southern; Corona & Santa Fe; Eldorado & Santa Fe; Elkhart & Santa Fe; Grand Canyon; Minkler Southern; Oklahoma Central; Salina & Santa Fe; Santa Fe & Los Angeles Harbour; and Verde Valley lines. Another application concerns the merging of the Laton & Western Railroad into the California, Arizona, & Santa Fe; and another the absorption of the Rocky Mountain & Santa Fe RR. Similarly the Erie Railroad has recently absorbed ten companies which previously were owned through stock control of railroads; they comprise the Paterson, Newark & New York; Erie Terminals; Penhorn Creek; Arlington; Bergen County; Bergen & Dundee; and Newark & Hudson; also the Long Dock Company; the New York Lake Erie & Western Docks & Improvement Company; and the Docks Connecting Railway Company.

New Signalling

Some important signalling contracts have been placed recently. The Louisville & Nashville is installing centralised traffic control on 167 miles of single track on its main line from Cincinnati to New Orleans, and has placed a contract with the General Railway Signal Company for the equipment. One section, 112 miles in length, from Welka to Catoma, will be controlled from a machine located at Georgiana, 259 miles from New Orleans; and the other, 55 miles long, from Mobile, 140 miles from New Orleans; the former machine will have 86 working levers, controlling 32 switches and 150 signals, and the latter 45 working levers, controlling 16 switches and 77 signals. Among signalling contracts, the General Railway Signal Company is installing electric block signals for the Missouri Pacific RR. on 78 miles of single track between Greenwood Junction and Wagoner, Oklahoma, and also on 33 single-track miles between Jefferson Barracks and De Soto, Missouri.

Galesburg Freight Improvements

On October 15, the Chicago, Burlington & Quincy Railroad put into service a considerable addition to the marshalling yard facilities at Galesburg, Illinois, on its principal main line 162 miles west of Chicago. These new facilities include a receiving yard, a classification yard, and a departure yard, with a total of approximately 55 miles of tracks, supplementing, in the westbound direction, the eastbound classification facilities installed at the same place in the years 1930 to 1932. The present addition, which is of the hump type, with 35 classification tracks each holding from 20 to 150 bogie wagons, and equipped with electro-pneumatic wagon retarders, power-operated switches and signals, and a loud-speaker system, was not begun until June, 1942, but with the approval of the War Production Board has been rushed to completion in no more than 4½ months, in order to relieve serious wagon and locomotive delays at Galesburg, and thus to speed the movement of war traffic generally.

Another Lorry Collision

A further illustration of the risks of high speed American trains at the innumerable level crossings in that country, many of them unprotected, by the criminal carelessness of lorry drivers, is given by an accident which befell the eastbound City of San Francisco streamliner on Chicago & North Western metals 11 miles east of Clinton, Iowa, on October 13. The three power cars of this diesel-operated train had cleared the crossing concerned when the next vehicle, a baggage car, was run into at right-angles by a lorry loaded with sheet steel. Although this car was derailed, the safety-guides fitted to the bogies kept it in line and upright, but the steel sheathing of all the following passenger cars except the last three was cut, dented, or scratched badly by the projecting steel plates on the lorry; journal-boxes were also broken and two passengers were cut by flying glass.

CEYLON

More Higher Staff for the Railway

It is understood that the question of strengthening the higher staff of the Rail way Department has been under considera tion. The Executive Committee of Communications & Works considered a proposal to obtain the services of two Divisional Transportation Superintendents. It was realised that it might not be possible to recruit men from the United Kingdom at present, but it was pointed out that it would be possible to obtain the temporary services of trained officers with experience of work in other parts of the Empire. The original proposal, made before the war, was to recruit two Divisional Transportation Superintendents from the United Kingdom. The Hammond Commission recommended the recruitment of a Superintendent of the Line from a British railway. Later two officers with local training were appointed, but it was reported that their services are not now available. It is learned that the Executive Committee approved the proposals made by the Minister of Communications & Works.

American Railway Speed in 1942

A review of speed progress in the United States to the peak in January, 1942, before war decelerations, when daily runs totalling over 90,000 miles were booked start-to-stop at 60 m.p.h. and over

By Cecil J. Allen, M.Inst.T.

THERE is a historic interest in reviewing the development of American railway speed in 1942, for in January of that year the aggregate mileage of American high-speed runs reached the highest peak that it is likely to attain for some time. Until the actual entry of the United States into the war, in December, 1941, there had been little or no interference with the schedules of the fastest trains, and preparations were in a forward state for the introduction of new streamliners, in particular the five trains of The 400 type under construction by the Chicago & North Western Railway for service between Chicago, Milwaukee, and various points in Wisconsin and Minnesota, the new Panama Limited of the Illinois Central, and the Colorado Eagle of the Missouri Pacific. Also the service planned for the winter of 1941-1942 between New York and Philadelphia and the Floridan Coast resorts was faster and more frequent than ever before; for the first time on record 24 hr. trains were to run by both the 1,368-mile Seaboard Air Line and the 1,328-mile Atlantic Coast Line routes between New York and Miami. In January, 1942, therefore, these cumulative accelerations had their maximum effect; the many Floridan coast services, the five new C. & N.W. streamliners, and the acceleration of the competing Chicago, Milwaukee, St. Paul & Pacific trains between Chicago and Milwaukee, all combined to produce a final peak in speed before the decelerations compelled elsewhere by war conditions arrested the speed increase, and began the first decline for many years in the American speed curves.

Few curves could be more impressive than those plotted in Fig. 1. Indeed, these speed graphs are more straight lines than curves, as from 1937 to 1942 inclusive the increase in the mileage of runs booked from start-to-stop at 60, 62, and 66 m.p.h. from start-to-stop has been of almost exactly the same magnitude year by year. At 60 m.p.h. and over the addition has averaged just under 11,000 miles a year, bringing the 1942 figure up to 92,118 miles, or excluding 323 miles of Canadian runs, to 91,795 miles. But for the onset of the war, there is little doubt that 1943 would have seen the aggregate U.S.A. mile-a-minute mileage rise above the 100,000-mile level. In the higher ranges of speed proportionate increases have been made. For the first time the number of runs at 66 m.p.h. and over exceeds 500, with a total mileage of 27,514; at 70 m.p.h. and over there are 165 runs totalling 9,202 miles; and at 75 m.p.h. and over 36 daily runs, with a total of 2,018 miles. Actually, on certain days in the week, the mileages in these highest speed ranges is considerably greater, and on other days it is less, due to the running of certain of the fastest streamline services between Chicago and the Pacific Coast so many times only in each month; in these cases the appropriate proportion only, to bring the runs down to a daily basis, has been credited to the company concerned.

Table A shows the proportion of the speed mileage that fell respectively to steam, diesel, and electric haulage during the years 1935 to 1942 inclusive, and should be read in conjunction with the curves in Fig. 2. These show the striking way in which the competition of steam and diesel propulsion for speed work has been carried on in the U.S.A. The diesel-electric streamliner first became firmly established in 1935 and 1936, after which there came a year in which the new trains were under close observation and test. Meantime the Diesel competition had caused a new exploitation of the possibilities of steam, and from 1936 to 1939 inclusive steam high-speed mileage rapidly rose. In 1938 a number of new diesel trains had made their appearance, but it was not until 1940 that there began the steepest ascent of the diesel curve, and at the same time the steam curve began to flatten out. By 1942 diesel had all but overtaken steam, even

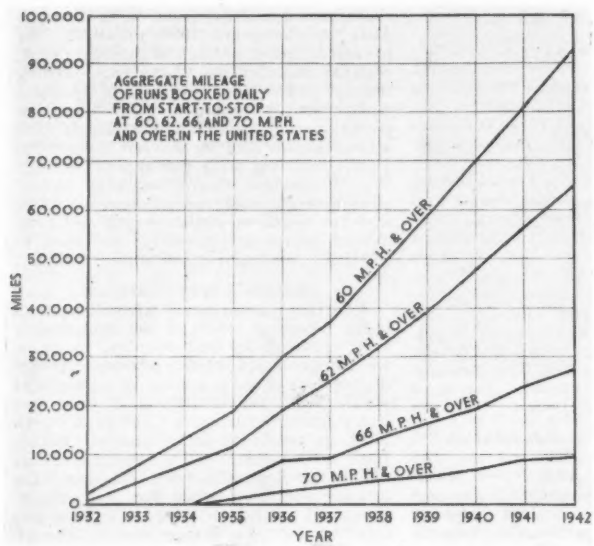


Fig. 1—Speed progress in U.S.A. during the eleven-year period 1932-42

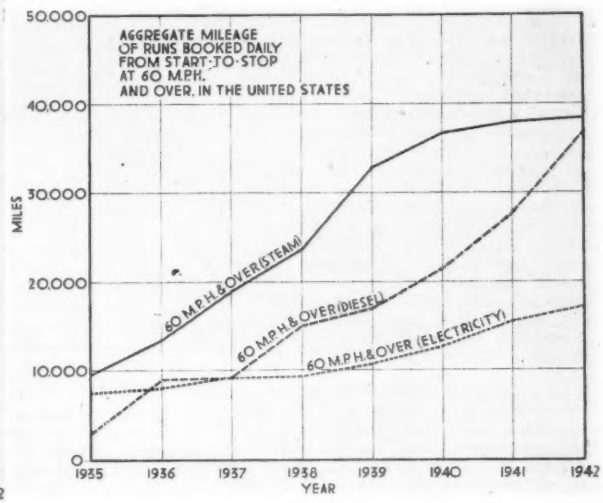


Fig. 2—A comparison of steam, diesel, and electric speed progress in U.S.A., 1935-42

TABLE A—AGGREGATE MILEAGE OF NORTH AMERICAN HIGH SPEED RUNS, 1935 TO 1942 INCLUSIVE

Year	60 m.p.h. and over				70 m.p.h. and over			
	Steam	Diesel	Electric	Total	Steam	Diesel	Electric	Total
	Miles	Miles	Miles	Miles	Miles	Miles	Miles	Miles
1935 ...	9,469	2,339	7,471	19,279	679	232	24	935
1936 ...	12,936	9,146	8,015	30,097	732	1,650	39	2,422
1937 ...	18,892	9,220	9,300	37,412	732	2,280	182	3,194
1938 ...	23,775	14,840	9,632	48,247	960	3,273	182	4,415
1939 ...	32,736	16,623	10,753	59,512	1,516	3,284	240	5,040
1940 ...	36,363	20,706	13,127	70,196	1,699	4,770	372	6,841
1941 ...	38,026	27,586	15,539	81,151	2,355	5,831	419	8,605
1942 ...	38,570	36,553	16,995	92,118	1,993	6,790	419	9,202

TABLE B—AGGREGATE MILEAGE OF RUNS ON NORTH AMERICAN RAILWAYS SCHEDULED DAILY AT SPEEDS OF 60 M.P.H. AND OVER FROM START TO STOP, JANUARY, 1942

The figures in brackets in each column indicate the number of individual runs making up each aggregate mileage figure

Railway	60 m.p.h. & over	62 m.p.h. & over	66 m.p.h. & over	70 m.p.h. & over	75 m.p.h. & over
	Miles	Miles	Miles	Miles	Miles
Steam Traction—					
New York Central System	18,262 (209)	10,218 (113)	2,082 (20)	399 (3)	—
Pennsylvania	5,739 (80)	4,473 (58)	2,098 (25)	833 (7)	—
Chicago, Milwaukee, St. Paul & Pacific	2,626 (50)	2,422 (43)	2,067 (34)	684 (14)	212 (4)
Atchison, Topeka & Santa Fe	1,498 (20)	823 (11)	48 (1)	—	—
Pennsylvania—Reading—Seashore	1,448 (34)	770 (17)	274 (6)	23 (1)	—
Wabash	1,174 (24)	478 (13)	78 (3)	—	—
Baltimore & Ohio	1,051 (18)	231 (3)	—	—	—
Union Pacific	943 (20)	163 (7)	—	—	—
Missouri Pacific	920 (27)	717 (21)	101 (2)	—	—
Chicago & North Western	888 (18)	392 (7)	79 (2)	—	—
Chicago & Eastern Illinois	689 (18)	627 (15)	316 (4)	—	—
Erie	625 (11)	368 (6)	80 (1)	—	—
Other railways	2,707 (62)	1,610 (35)	195 (6)	54 (1)	—
Total, Steam Traction	*38,570 (591)	†23,292 (349)	7,418 (104)	1,993 (26)	212 (4)
Diesel Traction—					
Chicago, Burlington & Quincy	6,337 (96)	5,579 (82)	3,733 (55)	1,833 (27)	622 (10)
Atlantic Coast	4,106 (36)	2,451 (21)	382 (3)	—	—
Union Pacific	4,039 (86)	3,267 (68)	2,033 (43)	1,564 (33)	558 (9)
Chicago, Rock Island & Pacific	4,000 (97)	2,711 (64)	1,337 (30)	369 (7)	—
Atchison, Topeka & Santa Fe	3,775 (90)	2,948 (69)	1,382 (32)	588 (13)	251 (5)
Chicago & North Western	3,615 (97)	3,030 (75)	1,951 (46)	1,033 (18)	221 (5)
Seaboard Air Line	3,426 (65)	2,913 (53)	1,607 (29)	726 (13)	45 (1)
Baltimore & Ohio	1,929 (36)	1,355 (25)	30 (1)	—	—
Florida East Coast	1,485 (62)	953 (39)	288 (11)	48 (3)	31 (1)
Chicago, Milwaukee, St. Paul & Pacific	921 (16)	752 (13)	622 (10)	412 (7)	78 (1)
C.B. & Q. and C.R.I. & P. Joint	875 (12)	751 (8)	259 (4)	—	—
Illinois Central	836 (32)	559 (23)	367 (12)	217 (6)	—
Other railways	1,209 (27)	940 (23)	258 (4)	—	—
Total, Diesel Traction	36,553 (752)	28,209 (563)	14,249 (280)	6,790 (127)	1,806 (32)
Electric Traction—					
Pennsylvania	14,514 (323)	11,349 (240)	5,370 (93)	382 (8)	—
Chicago, North Shore & Milwaukee	1,927 (117)	840 (46)	440 (24)	—	—
Chicago, South Shore & South Bend	520 (50)	480 (46)	27 (3)	27 (3)	—
Other railways	34 (4)	29 (3)	10 (1)	10 (1)	—
Total, Electric Traction	16,995 (494)	12,698 (335)	5,847 (121)	419 (12)	—
Individual Railway Totals—					
Pennsylvania	20,253 (403)	15,822 (298)	7,468 (118)	1,215 (15)	—
New York Central System	18,262 (209)	10,218 (113)	2,082 (20)	399 (3)	—
Chicago, Burlington & Quincy	6,550 (100)	5,735 (84)	3,733 (55)	1,833 (27)	622 (10)
Atchison, Topeka & Santa Fe	5,273 (110)	3,771 (80)	1,430 (33)	588 (13)	251 (5)
Union Pacific	4,982 (106)	3,430 (75)	2,033 (43)	1,564 (33)	558 (9)
Atlantic Coast	4,601 (41)	2,632 (23)	382 (3)	—	—
Chicago & North Western	4,503 (115)	3,422 (82)	2,030 (48)	1,033 (18)	221 (5)
Chicago, Rock Island & Pacific	4,000 (97)	2,711 (64)	1,337 (30)	369 (7)	—
Chicago, Milwaukee, St. Paul & Pacific	3,547 (66)	3,174 (56)	2,689 (44)	1,096 (21)	290 (5)
Seaboard Air Line	3,505 (67)	2,913 (53)	1,607 (29)	726 (13)	45 (1)
Baltimore & Ohio	2,980 (54)	1,586 (28)	30 (1)	—	—
Chicago, North Shore & Milwaukee	1,927 (117)	840 (46)	440 (24)	—	—
Florida East Coast	1,504 (63)	953 (39)	288 (11)	48 (3)	31 (1)
Pennsylvania—Reading—Seashore	1,448 (34)	770 (17)	274 (6)	23 (1)	—
Missouri Pacific	1,301 (39)	1,072 (32)	169 (4)	—	—
Illinois Central	1,195 (42)	835 (29)	442 (14)	271 (7)	—
Wabash	1,174 (24)	478 (13)	78 (3)	—	—
C.B. & Q. and C.R.I. & P. Joint	875 (12)	751 (8)	259 (4)	—	—
Chicago & Eastern Illinois	786 (21)	724 (18)	316 (4)	—	—
Southern Pacific	756 (10)	614 (8)	190 (2)	—	—
Erie	625 (11)	368 (6)	80 (1)	—	—
Chicago, South Shore & South Bend	520 (50)	480 (46)	27 (3)	27 (3)	—
Other railways	1,551 (46)	1,100 (18)	130 (5)	10 (1)	—
Grand Totals	*92,118 (1,837)	†64,199 (1,247)	27,514 (505)	9,202 (165)	2,018 (36)
Steam proportion (per cent.)	41·9	36·2	27·0	21·7	10·5
Diesel ,, ,,	39·7	44·1	51·8	73·8	89·5
Electric ,, ,,	18·4	19·7	21·2	4·5	—

* Includes 3 Canadian Pacific runs (178 miles) and 4 Canadian National runs (145) miles
† Includes 2 Canadian Pacific runs (113 miles) and 2 Canadian National runs (74 miles)

in the 60 m.p.h. range, and in the higher ranges, from 66 m.p.h. upwards, diesel propulsion for some years has held a considerable ascendancy. High speed with electric propulsion has shown a gradual but unchecked advance, and if the aggregate mileage falls a long way behind that achieved with steam and diesel power, it has to be remembered that almost the whole of the electric mileage is achieved by one company—the Pennsylvania.

Table B shows the high-speed mileages of individual railways in January, 1942, and reveals the noteworthy fact that the Pennsylvania Railroad, with steam and electrically-hauled trains, but no diesel streamliners, has for the first time passed the 20,000 mark in its mileage of runs booked daily at 60 m.p.h. and over from start to stop. No such record has been achieved previously by any railway in the world. The Pennsylvania total is 20,253 miles, and the 7,468 miles booked daily at 66 m.p.h. and over is also a mileage of notable dimensions. Next comes the 18,262 miles at 60 m.p.h. and over of the New York Central System, entirely with steam power. The biggest advance in the year has been that of the Atlantic Coast Line, which with its Florida diesel-hauled trains has moved in a year from ninth to second place in the diesel section, and from seventeenth to sixth place in total mile-a-minute mileage (862 to 4,601 miles). Other considerable increases by the companies concerned in handling the seasonal Florida traffic are from 1,200 to 3,505 miles by the Seaboard Air Line, and 635 to 1,504 miles by the Florida East Coast RR. The Chicago & North Western, with its new "400" streamliners, shows an increase from 3,415 to 4,503 miles, and the Chicago, Milwaukee, St. Paul & Pacific from 3,245 to 3,547 miles. The latter, having turned over one of its Hiawatha workings in each direction from steam to diesel power, appears for the first time in the diesel table, with 921 miles booked at 60 m.p.h. and over, but this is at the expense of some reduction in the steam mileage.

Up to the time of the deceleration of the "City" services of the Chicago & North Western, Union Pacific, and Southern Pacific Companies between Chicago and Los Angeles, San Francisco,

Roofed Wagons for Bulk Wheat

The New South Wales Railways are using 24-ton covered wagons which are provided with roof-loading and floor-discharging doors

One of the steel-roofed utility wagons now being used on the New South Wales Railways for the bulk transport of wheat

NEW South Wales produces one-third of all the wheat grown in Australia. The grain is sown in the late autumn (April and May) and harvested in the last quarter of the year. The crop varies, naturally, with seasonal conditions. This season there will be a 50-million bushel crop in New South Wales. Although substantial, that is not by any means a record. About two-thirds of it is available for export.

As the wheat-growing districts are in the interior of the State, the task of transporting the grain to the ports for shipment, to the silos for storage, or to flour mills for local use, presents something of a problem each year, which is increased by the fact that the traffic clashes with other heavy railway obligations. The wheat begins to flow before the heavy wool traffic has been finally disposed of, and also while pre-Christmas freight business is at its height.

Last year, the tremendous call on the railways for the war effort made the task even more difficult. Not only was this so as to providing wagons for the grain and engine power to haul them to their destinations—the average distance is 240 miles—but, due to the international situation, there is an acute shortage of tarpaulins to give suitable protection to the wheat whilst in railway transit.

The Commissioner for Railways, Mr. T. J. Hartigan, C.M.G., foresaw that difficulty some time ago and arranged for a large number of wagons, which were being built by a private contractor to the order of the department, to be steel-roofed. About four-fifths of the wheat is carried in bulk, and the wagons will be used for that work. They are classified as RU (roofed utility) wagons.

Until the present season bulk wheat was carried in open steel wagons, fitted with a movable ridge pole to provide a pitch for the tarpaulins. The new steel roofs will assure a weatherproof cover for the contents of the truck. In the roof are four trap-doors through which the wheat is loaded. It is discharged through eight hopper doors in the floor.

Each RU truck has a weight carrying capacity of 24 tons; tests have shown that about 21 tons of bulk wheat can be put into it. This is equal to about 262 bags of wheat. The standard wheat sack in Australia holds three bushels.

American Railway Speed in 1942

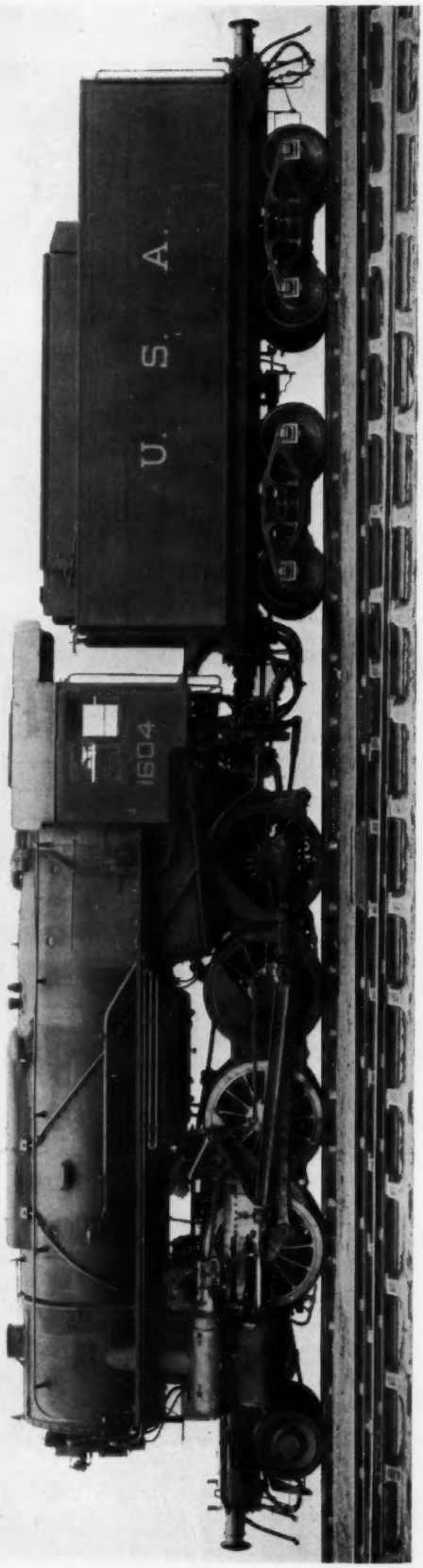
(*Continued from page* 167)

and Portland, and the Super-Chief and El Capitan of the Santa Fé between Chicago and Los Angeles (from 39¾ to 41¾ hr. for journeys of 2,227 to 2,299 miles), and also of the C.N.W.-U.P. City of Denver and the Burlington Denver Zephyr between Chicago and Denver (from 16 to 17 hr. for 1,048 and 1,037 miles respectively), the table of the fastest runs in the United States, as given in the January 9, 1942, issue of THE RAILWAY GAZETTE, shows so little change that it is unnecessary to reprint it. The principal change is that the 81·0 m.p.h. run of the eastbound Morning Hiawatha of the Milwaukee (from Sparta to Portage, 78·3 miles in 58 min.) is transferred from steam to diesel haulage, and the fastest run with steam now becomes the 78·4 m.p.h. of the same company's eastbound Afternoon Hiawatha from New Lisbon to Portage (43·1 miles in 33 min.). The only other diesel additions at above 74 m.p.h. from start to stop are three runs of the C. & N.W. "400" trains between Evanston and Kenosha, 39·6 miles in 31 min., at 76·6 m.p.h., and one by the Seaboard Air Line's Silver Meteor from Waldo to Ocala, 45·2 miles in 36 min., at 75·3 m.p.h. start to stop. With steam the only new run at above 69 m.p.h. is that of the Milwaukee's Chippewa express, from Deerfield to Milwaukee, 61·6 miles in 51 min., at 71·9 m.p.h. As a result of the C. & N.W. and Milwaukee speed-up between Chicago and Milwaukee, there are now no fewer than 19 daily trains covering the 85·0 miles in 75 min. or less, in some cases with intermediate stops included, and the joint average speed of 28 daily services is 60·9 m.p.h. Thus the progress of railway speed in the United States during the last decade has been immense in its scope, and brilliant in its execution, and it is unfortunate indeed that war has now come to write "finis" to this particular chapter in the development of rapid travel.

EMERGENCY STANDARD FOR BOLTS AND NUTS.—In 1941 the British Standards Institution issued at the request of the Iron & Steel Control of the Ministry of Supply a war-emergency British standard for black bolts, B.S. 916, providing for bolts and nuts having smaller widths across flats and thicknesses than those in the regular Whitworth series covered by B.S. 28. The introduction of this war-emergency standard was to secure the utmost economy in steel consumption, and the corresponding specification for turned and cold-forged bolts has been published recently by the British Standards Institution. This specification, which supersedes B.S. 191 and 193, covers both B.S.W. and B.S.F. bolts and nuts. The nominal dimensions of the widths across flats and the thicknesses of the bolts and nuts remain unaltered from the corresponding dimensions in B.S. 191 and 193, which are one size smaller than the regular Whitworth series, but amendments have been made in the tolerances to permit of the manufacture of the bolts and nuts either by turning from the bar or by cold forging. The specification also provides for one or two other minor relaxations, to facilitate manufacture during the war emergency. As an appendix to the specification, a schedule of physical properties is given for bolt and nut steels from 28 tons to 60 tons, and a system of marking the higher-tensile bolts is introduced. A further appendix to the specification gives a code of part numbers which has been developed in conjunction with the Ministry of Supply for use in connection with bolts and nuts for Government services, but which is equally applicable to the ordering and stocking of bolts and nuts for general-engineering purposes. Copies of this specification, B.S. 1083, may be obtained from the British Standards Institution, 28, Victoria Street, London, S.W.1, price 2s. (post free).

BRITISH STANDARD CODE FOR TEMPERATURE MEASUREMENT (B.S. 1041).—The British Standards Institution has published a comprehensive code for temperature measurement, the first of its kind to be published in any country, after several years of investigation by a committee of scientists, instrument makers, and engineers. The code covers the whole range of industrial thermometry. Copies may be obtained from the British Standards Institution, 28, Victoria Street, Westminster, S.W.1, price 12s. 6d. net (post free).

XUM



Side view of the American-built 2-8-0 "Austerity" locomotive, details of which were given in our December 11 issue

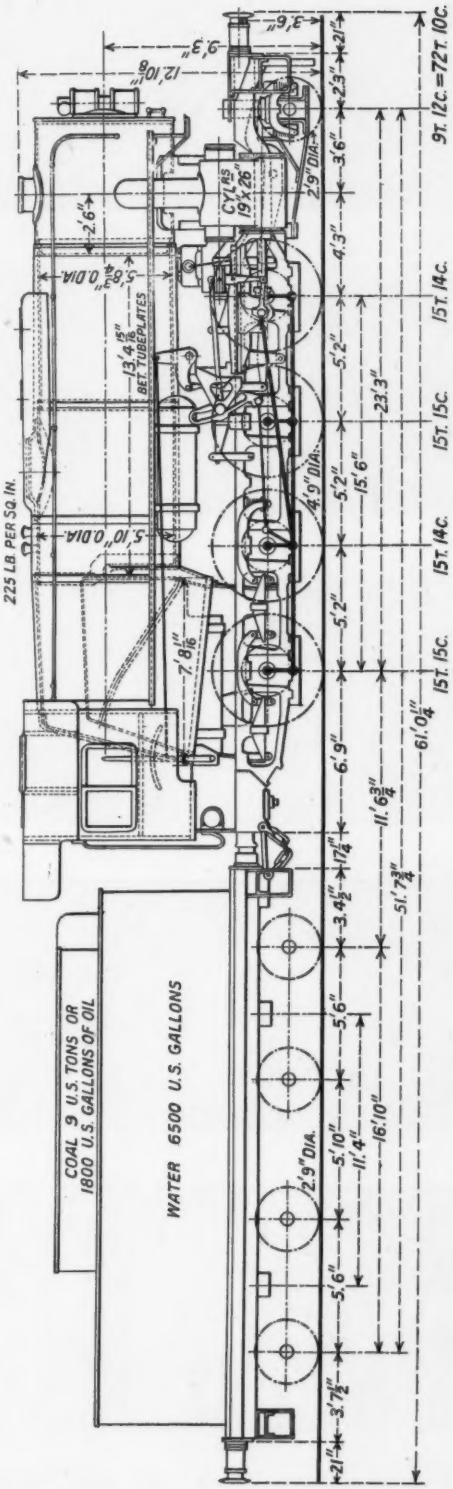
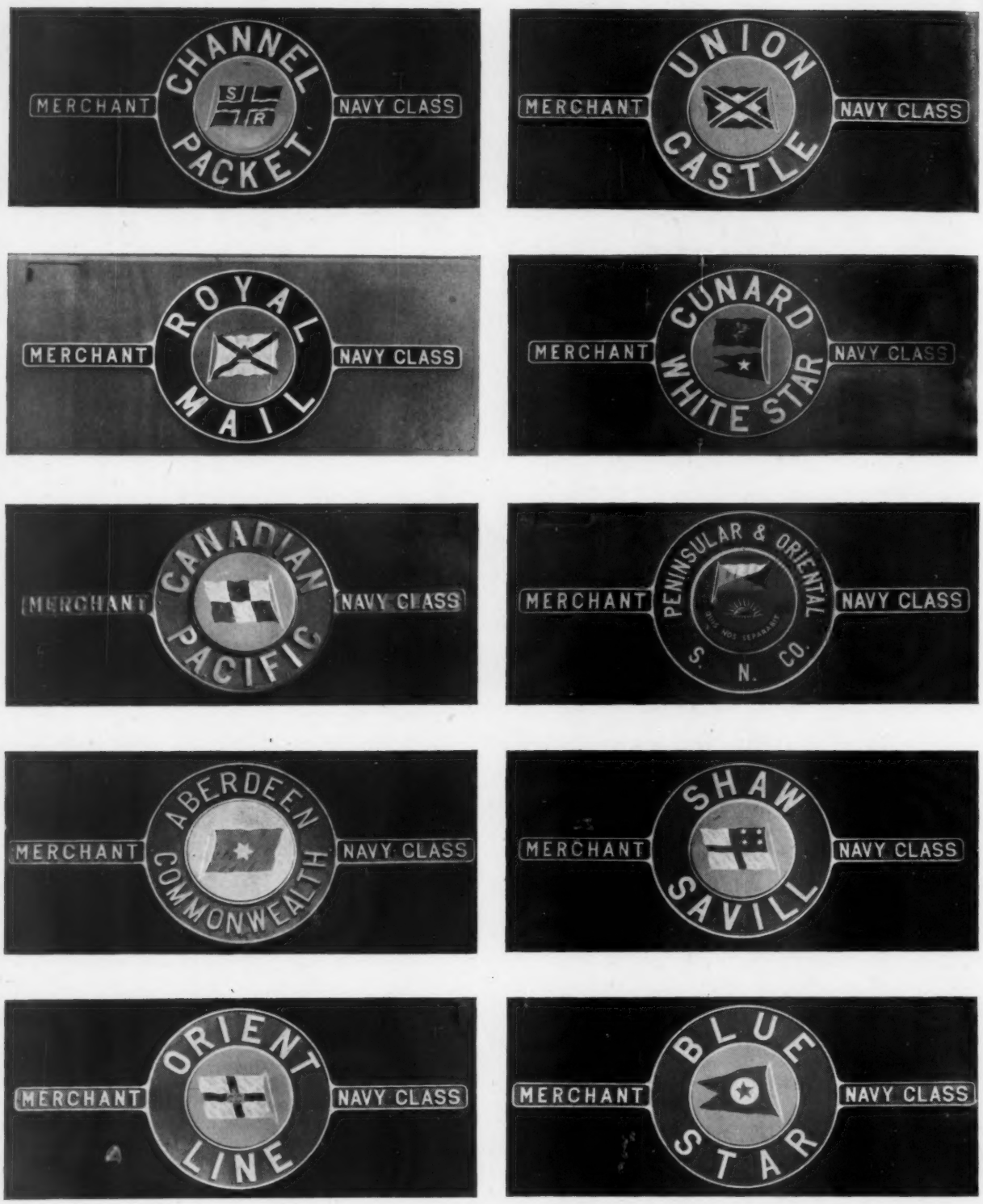


Diagram showing the principal dimensions and weights of the engine, and the tender capacities

AMERICAN-BUILT "AUSTERITY" LOCOMOTIVE IN USE IN GREAT BRITAIN

Engineering Library



The nameplates of the 10 "*Merchant Navy*" *Class locomotives designed by the Southern Railway, originally for Southampton—London ocean-mail traffic.* (*See editorial note, page* 158)

RAILWAY NEWS SECTION

PERSONAL

Lord Leathers, Minister of War Transport, who returned recently from attending the Casablanca conference, was received by The King on February 3 and was invested with the Insignia of a Member of the Order of the Companions of Honour.

Mr. William Arthur Stanier, Chief Mechanical Engineer, L.M.S.R., received the accolade at Buckingham Palace on February 9.

Mr. A. P. Reynolds, Chairman, Great Southern Railways Company (Eire), has been re-elected Chairman of the Irish Railway Clearing House Committee for 1943.

The Directors of the Great Southern Railways Company (Eire) have co-opted Mr. James Dwyer, of Hyde Park, Cork, as a Director in place of the late Dr. William Lombard Murphy. Mr. Dwyer was one of the directors who retired in 1942 when the board was being reconstituted under Emergency Powers Order No. 152.

Colonel Eric Gore-Browne, D.S.O., Deputy-Chairman, Southern Railway Company, has been elected Chairman of Glyn, Mills & Company (of which he was previously Deputy-Chairman), in succession to the late General the Hon. Sir Herbert Lawrence.

Sir Frederick Heaton, Chairman & Managing Director of Thomas Tilling Limited, has been elected a Director, and Chairman, of Short Bros. (Rochester & Bedford) Ltd.

The Minister of Supply has appointed Mr. Cecil Bentham, Chairman of Henry Simon Limited, as a Deputy Controller-General of Machine Tools.

Mr. G. J. A. Lindenberg, Assistant Chief Mechanical Engineer, South African Railways & Harbours, has been appointed Chief Stores Superintendent, in succession to Mr. G. E. Chittenden, who, as recorded in our August 21 and September 4, 1942, issues, has been appointed Assistant General Manager (Commercial).

We regret to record the death on January 27, in his 63rd year, of Dr. F. S. Sinnatt, C.B., M.B.E., D.Sc., F.R.S., Director of Fuel Research.

Mr. J. H. Stewart, Chief Superintendent (Staff), South African Railways & Harbours, has been appointed to the South African Railways & Harbours Service Commission. Mr. Stewart entered railway service in 1901, and has had wide general railway and secretarial experience. He was for a time Personal Clerk to the Assistant General Manager at Cape Town; and has served as Secretary to the Railways & Harbours Conciliation Board, the Staff Committee at headquarters, the Special Committee of Investigation (Accounting Department), and the Disciplinary Appeal Board. He represented the railway administration on the Committee of Inquiry into Local & Territorial Allowances in South-West Africa, and was a member of the Witwatersrand Juvenile Affairs Board. Mr. Stewart was transferred to headquarters in 1931, and held successively the positions of Staff Assistant, Assistant Superintendent, and Superintendent, before being appointed Chief Superintendent (Staff). He is a member of various committees, including the Railways & Roads Committee of the Civil Re-employment Board; and of the Railways & Harbours Conciliation Board.

Mr. W. Guy Jones, M.Inst.A.E., Road Motor Engineer, Southern & North-Eastern Areas, L.N.E.R., who, as recorded in our January 8 issue, has been appointed Road Motor Engineer for the whole system under the Chief Mechanical Engineer, was educated at Malvern College, and afterwards apprenticed to Palmers Shipbuilding & Iron Company, Jarrow-on-Tyne, for one year. He received his technical training at the Armstrong College, Newcastle-on-Tyne, and, on completion, served three years in the G.W.R. Locomotive, Carriage & Wagon Works, Swindon, as a pupil under the late Mr. G. J. Churchward. On the termination of his pupilage, he entered the Drawing Office, where he was engaged on experimental work on the design of locomotives. In 1913 he was appointed an assistant in the G.W.R. Motor-Car Department, Slough. He joined the A.S.C. (M.T.), in January, 1915, and went overseas as a workshop officer early in 1916. After a short time in that capacity, he was appointed 1st Class Inspector of Mechanical Transport under the Director of Transport, G.H.Q., B.E.F., with the rank of Captain. On demobilisation in September, 1919, he returned to the Motor Department, G.W.R., and, when that department was absorbed into the Road Transport Department under Mr. F. C. A. Coventry, he was appointed Assistant to the Superintendent of Road Transport. In March, 1929, he was appointed Road Motor Engineer, Southern Area, L.N.E.R., under the late Sir Nigel Gresley, and in 1934 was appointed Road Motor Engineer, Southern & North-Eastern Areas. At the time of his appointment, the company had only 550 motor vehicles and trailers; he is now responsible for the maintenance of a fleet of 4,280 motor vehicles and 3,800 trailers. He represents his company on the Automobile Research Committee of the Institute of Automobile Engineers.

Mr. W. Guy Jones

Appointed Road Motor Engineer, L.N.E.R.

We regret to record the death in Montreal, on December 26, at the age of 67, of Mr. John Lummis, who was Auditor, Freight Receipts, Canadian Pacific Railway, from 1937 till his retirement in 1941, after 48 years' service with the company.

Sir John E. Thornycroft, Managing Director of John I. Thornycroft & Co. Ltd., has become Governing Director & Chairman of the company. Mr. T. Donaldson, Lt.-Commander J. W. Thornycroft, and Mr. J. Maughfling have been appointed Joint Managing Directors; the latter has retired from the secretaryship, in which he is succeeded by Mr. A. H. Musto. Mr. N. M. Millard has become Assistant Secretary.

We regret to record the death, at the age of 66, of Mr. A. Clifford Roberts, who had been a Director of Turner & Newall Limited.

Mr. Louis A. Williams, Chief Staff Clerk, has been appointed Assistant Irish Traffic Manager of the L.M.S.R. in Eire, in succession to Mr. T. A. Burke, who has retired. Mr. Williams, who received his early education at St. Munchin's College, Limerick, joined the old London & North Western Railway in that city where his father, the late Mr. D. H. Williams, was then District Agent. Subsequently he was transferred to the Dublin offices and for the past 15 years has been dealing chiefly with labour problems.

Mr. W. H. Gaunt, Distribution Manager of J. Lyons & Co. Ltd., has been appointed a Director of the company. Mr. Gaunt is President of the Mansion House Association on Transport.

Mr. Albert Parkinson, Joint Managing Director of Crompton Parkinson Limited, has been appointed Deputy-Chairman of the company. Mr. E. C. Holroyde has been appointed Joint Managing Director.

We regret to record the death on February 1, after a long illness, of Mr. C. S. Harrison, who was appointed Secretary to the Executive Committee, L.M.S.R., in June, 1941.

Mr. J. P. Hamer, M.Sc.(Vict.), retired from his position as Railway Engineer to C. C. Wakefield & Company on January 29, after over 31 years' service. He was educated at Bedford Grammar School, and at Owens College, Manchester; and received his technical education at Horwich Works, as a pupil under the late Mr. H. A. Hoy and Mr. George Hughes. For some time he was in the service of the Lancashire & Yorkshire Railway, in charge of the Blackpool and Fleetwood locomotive sheds, and as Assistant to the Locomotive Running Superintendent at Horwich. Later he was Consulting Engineer to the Knott End Railway Company for twelve years, until the amalgamation of the latter with the L.M.S.R. Mr. Hamer was a Member of the Institution of Locomotive Engineers, and an Associate Member of the Institu-

tion of Civil Engineers, until the end of 1942, when he resigned from both institutions.

The late Rt. Hon. William Henry Fitzpatrick Watson-Armstrong, first Baron Armstrong of Bamburgh & Craigside, who was for many years a Director of the North Sunderland Light Railway Company, left £216,845.

Mr. H. R. Webb, Principal Assistant to the Stores Superintendent, G.W.R., who, as recorded in our February 5 issue, has been appointed Assistant Stores Superintendent, entered the company's service at Wolverhampton Stores in 1903, and, after five years' experience there, was transferred to Swindon. In 1923 he

Mr. H. R. Webb

Appointed Assistant Stores Superintendent, G.W.R.

was appointed Clerk-in-Charge of Accounts; and he was promoted to be Assistant to the Stores Superintendent in 1929; he became Principal Assistant to the Stores Superintendent in 1940. Mr. Webb holds the Royal Society of Arts Silver Medal for Accountancy, and he obtained distinction at the London School of Economics in Accounting & Business Methods, and in Commercial & Contract Law. He is Chairman of the Finance Committee of the Swindon Branch of the G.W.R. Staff Association.

Mr. F. C. Thornsloe, Chief Telegraph Clerk, Faddington, G.W.R., retired on January 22, after 45 years' service with the company, over 40 of which have been at Paddington. He is 60 years of age.

We regret to record the death on November 23 of Captain H. Miles, Editor of the *South African Railways & Harbours Magazine*, due to wounds received in North Africa while on official duty in connection with his work as Railway War Historian.

Mr. L. J. Knowles has been appointed Executive Assistant, Rail Transport, to the Transport Controller, Dominion of Canada (Mr. T. C. Lockwood). Mr. Knowles, whose services have been lent to the Government for the duration of the war, has been since December, 1939, Commission Traffic Representative of the Canadian National Railways, with jurisdiction over freight-traffic matters coming before the Board of Transport Commissioners for Canada and the Interstate Commerce Commission.

The Council of the Institute of Metals has agreed to award the institute's medal to Dr. Harold Moore, C.B.E., who has had a long and distinguished metallurgical career, and will receive the medal for outstanding services to non-ferrous metallurgy. He is a Fellow of the institute, and was President in 1934-36.

As the Minister of War Transport has ended the road hauliers' traffic pool, Mr. R. W. Sewill, who was seconded from his position as Director of Associated Road Operators to act as General Manager of the pool, has resumed his duties as full-time Director of the association.

Western Australian Government Railways

The Commissioner of Railways, Western Australia (Mr. J. A. Ellis) has been released by the Government for an indefinite term to carry out work of national importance in conjunction with the Director-General of Australian Land Transport (Sir Harold Clapp). Mr. Ellis has been appointed a member of the Australian Land Transport Board.

Mr. J. F. Tomlinson, Secretary for Railways & Assistant to the Commissioner, has been appointed Deputy-Commissioner of Railways for the period of Mr. Ellis's absence from the department. Mr. Tomlinson was appointed Secretary for Railways in 1924 and Assistant to the Commissioner in 1929. He has acted previously as Deputy Commissioner a number of times during the Commissioner's temporary absence from the department, including a period of over six months when Mr. Ellis visited England in 1939.

The position of Secretary for Railways & Assistant to the Commissioner is being filled temporarily by Mr. C. Reymond, Assistant Secretary for Railways.

Association of Consulting Engineers

The following recently have been elected Members of the Association of Consulting Engineers:—Mr. J. R. Beard, M.Sc., M.Inst.C.E., M.I.E.E. (Messrs. Merz & McLellan); Mr. Asa Binns, M.Inst.C.E., M.I.Mech.E. (Messrs. Rendel, Palmer & Tritton); Mr. Charles Blackburn, B.A. (Cantab.), M.I.E.E. (Messrs. Merz & McLellan); Mr. D. W. Coleman, B.Sc. (Eng.) (London), M.Inst.C.E., M.Inst.W.E. (Messrs. Howard Humphreys & Sons); Mr. William Dixon, M.I.E.E., M.N.E.C.Inst. (Messrs. Merz & McLellan); Mr. R. W. Gregory, M.I.E.E., A.I.H.V.E. (Messrs. R. W. Gregory & Partner); Mr. T. G. N. Haldane, M.A. (Cantab.), M.I.E.E. (Messrs. Merz & McLellan); Mr. J. S. Highfield, M.Inst.C.E., M.I.E.E. (Messrs. Highfield & Roger Smith); Mr. Arthur Howell, M.I.E.E., M.I.Mech.E., M.Inst.Met. (Messrs. Merz & McLellan); Mr. Francis Lydall, B.A. (Cantab.), B.Sc. (London), M.I.E.E. (Messrs. Merz & McLellan); Sir Murdoch Macdonald, K.C.M.G., C.B., M.Inst.C.E., M.P.; Mr. W. E. W. Millington, M.Inst.C.E., M.I.Mech.E., M.Inst.W.E., M.Inst.Met., M.I. & S. Inst.; Mr. H. D. Morgan, M.Sc., M.Inst.C.E., A.C.G.I., D.I.C. (Messrs. W. T. Halcrow & Partners); and Mr. J. D. Wall, B.Sc. (Eng.) (Manchester), M.Inst.C.E. (Messrs. Howard Humphreys & Sons).

Mr. J. I. Campbell, A.M.Inst.C.E., Assistant to Engineer (General), London, L.N.E.R., who, as recorded in our January 29 issue, has been appointed Assistant to Engineer (Construction), London, began his training with the former Caledonian Railway in the District Engineer's Office, Perth. Thereafter he became a junior assistant in the District Engineer's Office, Edinburgh, and early in 1914 entered the Chief Engineer's Office of the North British Railway, as an assistant. During the war of 1914-19, he served with the Army in France, latterly holding a commission in the Royal Engineers. On demobilisation, Mr. Campbell returned to the N.B.R. New Works Department, where he remained after the amalgamation and until 1930, when he was appointed Assistant District Engineer, Guide Bridge, L.N.E.R. In 1937

Mr. J. I. Campbell

Appointed Assistant to Engineer (Construction), London, L.N.E.R.

Mr. Campbell became District Engineer, Boston, and in 1938 he was appointed Assistant to Engineer (General), London, which position is now amalgamated in his new appointment.

Mr. P. N. Phizackerley has been promoted Lt.-Colonel, and appointed Officer Commanding 7th Technical Training Battalion (Docks Section), Indian Engineers. Colonel Phizackerley was a trainee in the Estate Department, L.M.S.R., before the war; he is the son of Mr. C. Phizackerley, Assistant to the Chief Operating Manager, L.M.S.R., and the grandson of Mr. G. T. Phizackerley, who was the District Goods Manager at Liverpool of the L.N.W.R. Colonel Phizackerley obtained a commission in the Supplementary Reserve of Officers, Royal Engineers, early in 1938, and proceeded to France with No. 2 Docks Group on the outbreak of war. He was promoted Captain shortly afterwards and subsequently was appointed Adjutant. After the collapse of France he returned to England, and, in May, 1941, at the age of 24, was promoted Major and given command of 999 Company, R.E. From this command he was selected for an important staff post with the Middle East Forces, and later went to India in connection with the expansion of the Indian Army.

TRANSPORT SERVICES AND THE WAR—177

Lease-Lend Mobile Cranes

Large consignments of American-built road mobile cranes of varying types have arrived in this country, and some of them are being used by the British railways at stations where existing cranage facilities are not sufficient to meet the big war traffics now passing. These cranes are helping to speed up the unloading and loading of wagons, and are ample justification for the friendly gesture of the United States in supplying them under the Lease-Lend arrangements.

L.N.E.R. Train Alterations

An important alteration of service was introduced by the L.N.E.R. on February 1. The 5.15 p.m. dining car express from Leeds Central to Kings Cross leaves at 5.30 p.m., and the through Bradford portion at 5.6 p.m. from Bradford Exchange instead of 4.50 p.m., but the departure from Hull of the connecting service is unchanged at 4.50 p.m. Intermediate stops are still made at Holbeck, Wakefield, Doncaster, Retford, Grantham, Peterborough, and Finsbury Park, and Kings Cross is reached at 10.24 instead of 10.2 p.m.

A new train, primarily for war workers, leaves Welwyn Garden City at 5.40 p.m. for Hatfield, Finsbury Park, and Kings Cross only, due 6.21 p.m.

Improved Road Vehicle Lighting

As a result of joint consideration between London Transport and Government departments concerned, improvements are now to be made in the lighting of London buses, trams, and trolleybuses. With the interior lighting, in some cases it will be improved by an increase in the intensity of the lamps; in others, by alterations to the shades. A considerable amount of work is involved, but it is being put in hand as quickly as possible. Alterations to the head lamps will also improve the driving light. Provision is being made whereby the lighting is subject to reduction to the standard approved by the Government in the event of an "alert."

More Two-Berth First-Class Sleepers

The use of two-berth first-class sleepers introduced experimentally by the L.M.S.R. on May 11 last (see our May 22 issue, page 597), has proved to be a great convenience to night travellers, and further sleeping cars are being converted on both the L.M.S.R. and L.N.E.R. On the L.M.S.R. system a further 36 sleeping cars are involved. In each of them two single-berth compartments will be converted to take two berths, thus providing accommodation for a total of 72 additional passengers. On the L.N.E.R. system 18 first-class sleeping cars are being converted by fitting a second berth in each end compartment, thus increasing the sleeping capacity from 10 to 12, or 36 additional berths in all. These will come into service on the usual night expresses that have sleeping car accommodation.

By reason of war conditions, the number of sleeping cars available on night expresses has had to be cut considerably, and the two-berth compartments will provide additional accommodation on heavily booked trains without adding to their weight. The two berths are installed one above the other and a light step ladder is provided for the use of the occupant of the top berth. Duplicate bedside lighting for each berth has been installed.

Producer-Gas Buses

At the suggestion of the Ministry of War Transport, Mr. V. A. M. Robertson, M.C., M.Inst.C.E.., M.I.Mech.E., Engineer-in-Chief to the London Passenger Transport Board, has been appointed Chairman of a new panel composed of operators of public service vehicles which has been set up to advise the Minister on the operation of producer-gas vehicles in the light of experience which is being obtained throughout the country. It may be recalled that in June last, a London producer-gas bus was demonstrated to the Press (see our June 12 issue, page 651). The producer unit itself had been developed by Thomas Tilling Limited from the Government emergency producer, and the vehicle had been converted by London Transport. At present, 18 buses of this type are running in daily service on East London routes. The board's programme provides for approximately 550 producer-gas buses, which will operate in Central and Country areas. The larger proportion will be in the Central area. The necessary fittings for converting the vehicles and attaching the producer-gas unit are now well in hand, and it is expected that the converted vehicles will be in service shortly. The buses which are being converted are the "ST" petrol-engined type, with a seating capacity of 48.

For the operation of producer-gas vehicles, special service stations are necessary in order to handle the stock of anthracite which is used to generate the gas and also to provide facilities for servicing the producer-gas trailers. The service stations take the form of annexes which are to be built adjacent to existing garages for operating the vehicles, and 27 such stations are now in the course of arrangement in various parts of the board's area. Each bus will burn approximately one ton of anthracite a week and requires refuelling every 80 miles.

London Transport states that the power developed by the producer-gas engine is

SOUTHERN RAILWAY

LIGHTING IN TRAINS

On and from Monday, Feb. 1st. White Lights in compartments of electric trains in the London inner and outer areas will NOT be switched out on arrival at Stations, as hitherto.

During "Alerts," and also if blinds are left up by passengers, the white lights will be switched out.

MAKE SURE YOU HAVE ARRIVED AT A PLATFORM BEFORE ATTEMPTING TO ALIGHT.

The Southern Railway poster announcing improved train lighting from February 1

Two views in the commissary cars which are attached to troop trains on the Canadian National Railways. Men from each carriage secure food and beverages for their company mates

approximately 50 per cent. less than a petrol unit, but, by fitting special pistons and other modifications, the board has reduced the loss of power to approximately 25 per cent. This loss in power is most noticeable in getting away from stopping-places with a full load of passengers, and climbing gradients. For normal running on the level, the bus can maintain a satisfactory speed. A saving of 3,500,000 gal. of petrol a year will result from the operation of the London Transport fleet of producer-gas vehicles. As this is a new venture, the training of the garage staff and drivers is of the utmost importance. A special organisation is in being for this purpose.

At the request of the Ministry of War Transport, and in order to help other operators, arrangements have been made for staff from these undertakings to visit one of the London Transport garages operating gas-producers, to obtain practical experience. Facilities have also been given to engineers of other companies to obtain information regarding the conversion of petrol buses to the producer-gas system.

Producer-gas Vehicles in India

There were between 4,000 and 5,000 lorries and buses running on producer gas in India about the middle of the year 1942, according to a recent report in *Indian Engineering*, and it is considered likely that the use of producer gas will continue after the removal of restrictions on petrol. Both Central and Provincial Government assistance is given in such matters as the supply of steel for the construction of producers, the ensuring of adequate supplies of charcoal of high quality, and the general development and improvement of the use of producer gas in motor vehicles. The Government of the United Provinces required the provision of producer plants for all public vehicles on or before September 1, 1942. The Punjab Government has made a grant in aid of research on producers and the production of charcoal. Steps are being taken by the Forest Department to secure to the public the most suitable grades of charcoal. At least three stages of filtering are provided for the gas and some makers add a fourth filter. Only about 60 per cent. of the power available from petrol can be obtained from producer gas in the same engine, and the gas must be augmented with petrol on hills. It has been found beneficial to increase the compression ratio to 8 : 1 with producer gas, but this is not a general practice in India. Savings on fuel cost, compared with petrol, will quickly pay for producer-gas plant under Indian conditions. Lubrication presents no difficulty, but the upper cylinder lubrication needs attention because the gas is much drier than the petrol mixture.

Canadian Hospital Car

In order to provide comfortable travel for casualties of all branches of the Canadian Active Services returned from the overseas war zones, a special hospital car has been designed by officers of the Royal Canadian Army Medical Corps and engineers of the Canadian National Railways. The car, which is an all-steel one accommodating 28 bed cases, was designed as to the interior layout by Colonel E. L. Stone, of Ottawa, Embarkation Medical Officer, working in co-operation with C.N.R. carriage staff, and was converted in the Montreal shops of the railway. Colonel J. L. Ralston, Minister of Defence, and officers of the Royal Canadian Army Medical Corps inspected the car at Ottawa. Colonel Ralston praised the designers and railwaymen for their fine work. We reproduce a plan showing the layout of the vehicle.

Fewer Buses in Caracas

Since July 1 of last year, a policy of steady reduction in the number of motor-buses which work in the city of Caracas, Venezuela, has been pursued steadily. The withdrawal towards the end of last year of a further 80 vehicles brings the total withdrawals in the second half of 1942 up to 230. It is estimated that a total of 35,000 km. (21,750 miles) will be saved daily.

Jamaican Railway Difficulties

Jamaican railways are experiencing difficulty in operating, because of shortages of coal and inability to secure replacement parts for equipment. Wood is being used as fuel on easy grades, but it is found necessary to use coal for handling goods over steeper grades. Passenger travel has been reduced to a minimum in order to conserve coal for the movement of foodstuffs.

Alcohol Fuel in Nicaragua

Since November 16, all "petrol" sold in Nicaragua for use in motorcars is reported to consist of a mixture of 20 per cent. petrol and 80 per cent. high-proof (96°) alcohol. The alcohol is made in the country from sugarcane molasses and sugar-mill wastes. Recent tests carried out by the authorities are stated to show "that this mixture is efficient and does not harm the motor."

Sweden and Air Raid Warnings

An efficient system of transmitting air raid warnings by telephone has been developed in Sweden, mainly because sirens and other outdoor alarms do not sufficiently penetrate the double doors and windows customarily closed in winter. Telephone exchanges in 25 cities and towns can now convey signals, and equipment is being installed in other exchanges as rapidly as it can be obtained. When an air raid alert is sounded, all regular telephone service to subscribers is interrupted by relays and no use can be made of telephones until the alarm has been transmitted. Under these arrangements, telephones are rung simultaneously in batches of 1,000, and the whole service is dead until all subscribers have been rung. It is understood that railway stations with call boxes are included within the scope of the warnings.

Norway-Finland Railway Proposed

The Germans are proposing to build a railway linking the extreme northern part of Norway with Finland, according to reports reaching the Norwegian Telegraph Agency. It is stated that it will begin at Nordreisen and will extend to an unnamed point in Finland. It is said that German prisoners at the camp at Nordreisen will probably be employed on the construction work, and that already they have begun

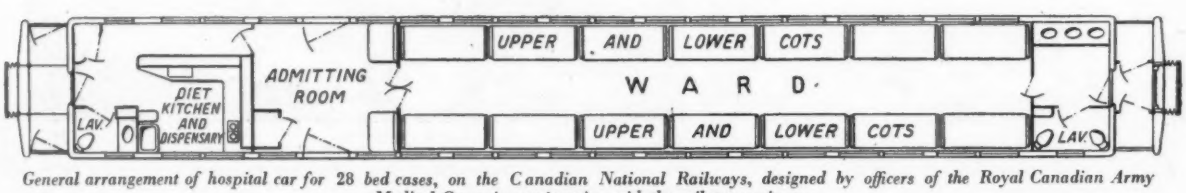
Russians removing the German nameboard from Kantemirowka Station, after its recapture

felling trees to clear the track. It is not easy to see exactly what may be meant by this report, as Nordreisen is substantially to the north of any existing railway, and the country between here and the main parts of Finland is very mountainous. It is unlikely that any connection with existing railways, either in Norway or Finland, can be contemplated, and, if the Germans really have in mind the construction of a railway here, it will probably be an industrial line serving the valley of the River Reisen, the upper reaches of which are very close to a small portion of Finnish territory.

The Mayo Pooling Scheme

The recent pooling arrangements of road services in the North Mayo area under the control of the Great Southern Railways have given satisfactory results. The scheme, it may be recalled, was introduced on December 7 as an experiment. Eleven road service routes were set up, and the vehicles specially adapted to enable all classes of traffic, including livestock, to be handled. They range from 2-ton types to heavy types, with trailers capable of carrying 11-ton loads. Central assembly depots were established at Ballina and Belmullet, and 25 goods and parcels receiving stations were established at suitable points in the area. The arrangements were described in our December 4 issue (pages 538 and 557), and the first month's working was referred to in our January 22 issue (page 98).

Readjustment of supplies of foodstuffs and other commodities, rendered necessary by the scheme, was carried out by the Department of Supplies, in collaboration with local traders, without serious dislocation of normal distribution arrangements. We are officially advised that, before the introduction of the plan, there were 111 vehicles operating in the area, with an additional 6 operated by the railway company. The company's fleet was increased to 17 to operate the scheme, and, in addition, 48 permits were issued to licensed hauliers and others. The number of operating vehicles has been reduced from 117 to 65 a total cut of 52. Petrol consumption showed a reduction from 3,100 to 2,664 gal. in the first month, and it is expected that a further saving will be effected in future months.



General arrangement of hospital car for 28 bed cases, on the Canadian National Railways, designed by officers of the Royal Canadian Army Medical Corps in conjunction with the railway engineers

Western Australian Railway Results

A statement of comparative results of working of the Western Australian Government Railways for the five years ended June 30, 1942, issued in advance of the Commissioner's annual report, shows that earnings of the Railway Department during the year 1941-42 totalled £3,996,312, a record earning for any year, and an increase of £424,484 over the figure for the preceding similar period. Working expenses for the year amounted to £3,025,919, and, after deducting interest on capital (£1,032,870), there was a deficit of £62,477, an improvement over 1940-41 of £153,865. The operating ratio of working expenses to earnings was 75·72 per cent. compared with 77·21 per cent. in the previous year. The capital cost of the railway system at June 30 was £26,824,674, and the average number of miles worked was 4,381. Earnings an average mile worked were £912, and working expenses were £691. The percentage of net revenue to capital was 3·62 per cent., an increase of 0·58 per cent. Train-miles run totalled 6,497,115, earnings a train-mile were 147·62d., working expenses, 111·78d., and interest, 38·15d.

Petrol rationing and the smaller number of private motor vehicles on the roads are reflected in the passenger journeys, which numbered 14,532,432, an increase of 3,014,216 over the previous year. Paying goods and livestock tonnages also showed increases: the respective tonnages were 2,638,469 for 1941-42, and 2,603,857 for 1940-41. Due to a reduction in the average haul, however, the paying goods and livestock ton-mileage decreased from 351,245,171 to 341,728,598.

Ton-mileage statistics for the two years ended June 30, 1942, show that wheat remains the principal item of goods traffic; during this period, 666,860 tons, representing 25·27 per cent. of the total tonnage carried, and 15·85 per cent. of the total earnings, was conveyed. Wheat traffic earned only 1·16d. a ton-mile, and, as the earnings a ton-mile on all goods traffic was 1·86d., the influence which this large volume of low-freighted traffic had on the department's finances will be appreciated. Next in volume carried was local timber, with a tonnage of 332,600, and yielding earnings of £267,670, or 12·61 per cent. of total tonnage and 10·12 per cent. of total earnings. This traffic returned 1·87d. a ton-mile. Miscellaneous traffic, which includes such commodities as ores and minerals and bricks and stone, provided 200,968 tons of traffic; and fertilisers, 178,939 tons. Both of these items are in the low-freight range. The higher-class traffic (on which the department counts to recover losses incurred from unremunerative traffic), that is, wool, "C" class, first class, and second class, showed a satisfactory increase during 1941-42 over the previous year.

Working expenses during 1941-42 were affected adversely by such factors as basic-wage increases to staff, payroll tax, and considerably-enhanced prices of goods used in maintenance and general operation. Coal, particularly, has risen substantially in price. Despite these increases in cost, fares and freights have remained constant, which illustrates the tight hold which has been kept by the management on all controllable expenditure.

The rolling stock in service on June 30 last consisted of 390 locomotives, 449 passenger vehicles, 220 brakevans, and the equivalent of 13,064 four-wheel goods vehicles. The number of staff employed during the year averaged 7,133.

TERRITORIAL CHANGES IN S.R. DIVISIONS.—As from January 1, some changes were made in the territory of the London West and Southern Traffic Department Divisions, Southern Railway. The sections of line from Waller's Ash signal box (between Micheldever and Winchester) to Southampton Terminus, and from a point immediately west of Treloar Cripples' Home Siding, Alton, to Winchester Junction, previously part of the London West Division, now come under the Southern Divisional Superintendent. The stations affected are:—

Winchester	Southampton Terminus
Shawford & Twyford	Southampton Goods
Eastleigh	Medstead & Four Marks
Swaythling	Ropley
St. Denys	Alresford
Northam	Itchen Abbas

WESTERN AUSTRALIAN GOVERNMENT RAILWAYS WORKING RESULTS FOR THE LAST FIVE YEARS

—	Year ended June 30					1942 compared with 1941	
	1942	1941	1940	1939	1938	Increase	Decrease
Amount debited to capital account	£26,824,674	£26,794,380	£26,736,299	£26,558,893	£26,286,115	£30,294	
Average number of miles worked	4,381	4,381	4,380	4,376	4,374		
Miles open for traffic on June 30	4,381	4,381	4,381	4,378	4,376		
Average capital cost a mile	£6,122	£6,116	£6,103	£6,066	£6,007	£6	
Earnings	£3,996,312	£3,571,828	£3,555,982	£3,599,143	£3,677,850	£424,484	
Working expenses	£3,025,919	£2,757,891	£2,828,329	£2,911,570	£2,709,914	£268,028	
Surplus earnings over working expenses	£970,393	£813,937	£727,653	£687,573	£967,936	£156,456	
Interest charges	£1,032,870	£1,030,279	£1,028,014	£1,000,799	£987,887	£2,591	
Balance after paying working expenses and interest—deficit	£62,477	£216,342	£300,361	£313,226	£19,951	—	£153,865
Working expenses per cent. of earnings	75·72	77·21	79·54	80·90	73·68	—	1·49
Percentage of net revenue to capital	3·62	3·04	2·73	2·60	3·70	0·58	
To the average mile worked—							
Earnings	£912	£815	£812	£822	£841	£97	
Working expenses	£691	£629	£646	£665	£620	£62	
Interest	£235	£235	£234	£229	£226		
Working expenses plus interest	£926	£864	£880	£894	£846	£62	
Balance after paying working expenses	£221	£186	£166	£157	£221	£35	
Net return after paying working expenses and interest—deficit	£14·26	£49·38	£68·57	£71·58	£4·56	—	£35·12
Train-miles run	6,497,115	6,277,745	6,262,437	6,721,453	6,534,855	219,370	
To the train-mile—							
Earnings	147·62d.	136·55d.	136·28d.	128·51d.	135·07d.	11·07d.	
Working expenses	111·78d.	105·43d.	108·39d.	103·96d.	99·52d.	6·35d.	
Interest	38·15d.	39·39d.	39·40d.	35·73d.	36·28d.	—	1·24d
Working expenses plus interest	149·93d.	144·82d.	147·79d.	139·69d.	135·80d.	5·11d.	
Balance after paying working expenses	35·84d.	31·12d.	27·89d.	24·55d.	35·55d.	4·72d.	
Net return after paying working expenses and Interest—deficit	2·31d.	8·27d.	11·51d.	11·18d.	0·73d.	—	5·96d.
Passenger journeys	14,532,432	11,518,216	10,793,396	11,415,615	12,011,213	3,014,216	
Tonnage carried—							
Paying goods	2,509,032	2,484,917	2,548,628	2,743,199	2,948,083	24,115	
Departmental goods (non-paying)	477,104	541,157	539,101	673,769	543,991	—	64,053
Livestock	129,437	118,940	110,248	115,942	113,838	10,497	
Total goods and livestock	3,115,573	3,145,014	3,197,977	3,532,910	3,605,912	—	29,441
Total ton-miles—Paying goods and livestock	341,728,598	351,245,171	361,689,595	378,089,487	390,912,912	—	9,516,573
Average mileage each ton hauled	129·51	134·89	136·03	132·24	127·67	—	5·38
Earnings—							
Coaching (including mails)	£1,112,095	£825,971	£725,340	£704,300	£726,206	£286,124	
Goods (including livestock)	£2,736,236	£2,651,353	£2,744,719	£2,807,215	£2,873,896	£84,883	
Average goods and livestock a ton a mile	1·86d.	1·75d.	1·77d.	1·71d.	1·70d.	0·11d.	
General miscellaneous (including rents)	£147,981	£94,504	£85,923	£87,628	£77,748	£53,477	
Outstanding revenue on June 30	£252,864	£,158,373	£148,045	£104,706	£107,405	£94,491	
Rolling stock on June 30—							
Locomotives	390	413	423	429	422	—	23
Passenger vehicles	449	445	445	475	477	4	
Brake vans	220	230	236	213	212	—	10
Goods vehicles	10,754	10,972	11,003	10,887	10,875	—	218
Equivalent of goods vehicles in 4-wheel wagons	13,064	13,343	13,396	13,276	13,284	—	279
Total carrying capacity exclusive of service stock (tons)	116,073	118,332	118,634	116,978	116,435	—	2,259
Average staff employed during year—							
On working expenses	7,133	7,137	7,539	7,711	7,535	—	4
Total	8,148	7,887	8,385	9,020	8,565	261	
Population of State (exclusive of aborigines) on June 30	470,000	469,700	467,900	464,900	459,600	2,300	
Mean population of State for year	468,800	468,700	466,500	463,592	453,150	100	

New European Postal Union

A European Postal & Telecommunications Union was established among thirteen signatory countries at Vienna on October 19 last. The states concerned are Albania, Bulgaria, Croatia, Denmark, Finland, Germany, Holland, Hungary, Italy, Norway, Roumania, San Marino, and Slovakia; among German-controlled countries, France, Belgium, Serbia, and Greece, and, among neutral countries, Sweden and Portugal did not participate; and Turkey, the Vatican City, Spain, and Switzerland were represented by observers. The Chairman of the conference, which resulted in the agreement, and which was called by Germany, was the German Minister of Posts. The main task of the union, the secretariat of which is to be in Vienna, is to organise and supervise the application of the new international regulations devised to simplify postal and telecommunications services between the signatory countries. Germany previously had concluded bilateral agreements with most of the states concerned in respect of posts and telegraphs, but these have been unified, and extended to all the signatory countries; and the agreement covers also international traffic among the latter, with which Germany is not necessarily concerned.

Uniform Letter Rates

The agreement provides for the establishment of uniform international postal fees at the following basic rates; for letters up to 20 gr. (0·75 oz.), 12 pfennig; for letters exceeding 20 gr., but not over 250 gr. (8·8 oz.), 24 pfennig; for letters, exceeding 250 gr., up to 500 gr. (17·6 oz.), 40 pfennig; for letters from more than 500 gr. up to 1,000 gr. (35·2 oz.), 60 pfennig; and for postcards, 6 pfennig. Postal administrations may modify the basic rates, if necessary, to adapt them to the economic needs of their countries and to the intrinsic values of the fees as expressed in their own currencies; the lower limit of such modifications must not exceed 25 per cent., nor the upper limit 50 per cent. If need be, the introduction of the new rates may be postponed for a year from April 1, 1943, the date on which the agreement is to become effective.

German postal circles claim that the elimination of the land-transit fees and the introduction of uniform weight-categories will simplify greatly executive work in the handling of postal letters. The new international fees represent in many cases a considerable reduction on the international postage rates now in force in various countries, but, in many of the signatory States, the latter are not yet on the same level as the respective inland rates. In Germany, the international letter fees now do not exceed those in force for the inland letter mail.

Basic Telegram Rates

The protocol concerning the telegraphic services establishes a basic word-rate for international telegrams of 15 pfennig; signatory countries separated from each other by other signatory countries are entitled, in order to reduce the financial burden which the new fee may imply, to apply a unified fundamental fee equivalent to 20 pfennig a word. It is pointed out that the new telegraphic rate does away with about 28 different fees for ordinary telegrams in force in the signatory countries. The new uniform rate eliminates also reciprocal accounts between the terminal countries and each terminal signatory State will return under the new regulations, its own telegraphic receipts in full. Telegraph transit fees have been reduced accordingly; this means a reduction in the amounts due to the countries concerned for telegrams in transit, but an easing of the financial burden for various telegraph administrations.

Miscellaneous Provisions

A committee has been established to deal with the technical development of telecommunications, and a decision was taken to the effect that developments in the various countries should be co-ordinated.

The official languages for matters concerning the union are German and Italian. Permanent committees may be established for the study of particular postal or telecommunications problems. Each member of the union has one vote on any matter to be decided. Arbitration courts, to settle differences between administrations, will be set up, and will consist of elected members of the union; procedure is to be analogous to that of the Universal Postal Union in similar cases. Any European postal administration may join the union, and any administration is entitled to leave it at one year's notice. For all matters not covered by the agreement, the rules of the Universal Postal Union are to remain in force. At the suggestion of Italy, the next conference is to take place in Rome.

Questions in Parliament

Civil Aviation

Mr. W. R. D. Perkins (Stroud—C.) on January 27 asked the Secretary of State for Air whether he was aware of a report just issued by a Committee of the American House of Representatives forecasting that 500,000 people would be flying their own aeroplanes and 20,000,000 passengers would be travelling every year by commercial air lines; and whether he expected any similar developments in the Empire.

Sir Archibald Sinclair (Secretary of State for Air): I have not seen the report referred to, but I understand that it was submitted by a Select Committee of the House of Representatives appointed to investigate air accidents. As to the second part of the question, the answer is in the affirmative. The scale of expansion is, of course, a matter of conjecture.

Mr. W. R. D. Perkins on January 27 also asked the Prime Minister whether, in view of the importance of civil air transport in the Empire, he would consider the appointment of an additional Permanent Under-Secretary of State to the Air Ministry to take charge of civil aviation.

Mr. C. R. Attlee (Deputy Prime Minister): I am obliged to Mr. Perkins for his suggestion, but I do not think it would be advantageous to adopt it, at any rate at the present time.

Mr. W. R. D. Perkins (Stroud—C.) on February 3 asked the Secretary of State for the Colonies what steps had been taken to prepare plans for the development of civil aviation in the Colonial Empire; and the name of the division in his Ministry responsible.

Colonel Oliver Stanley (Secretary of State for the Colonies): All Colonial Governments have been requested to furnish their views on the question of post-war civil aviation developments in their territories. When these have been received I shall be able to prepare more detailed schemes both for civil aviation services and ground facilities. I am fully aware of the importance of this question and am considering what further steps can usefully be taken at this stage. As to the last part of the question, civil aviation matters are, in the present war conditions, the concern of the Defence Department of the Colonial Office in conjunction with the various Geographical Departments.

Captain Sir William Brass (Clitheroe—C.): Can the Minister say when he expects to get replies from the various Colonies?

Colonel Stanley: I am afraid that I cannot forecast the actual date. The difficulties of communication are, of course, great, and all Governments are working under great pressure, but I hope to get the replies soon.

Sir W. Brass: Will the Minister press them to send the replies soon?

Colonel Stanley did not reply.

Mr. W. A. Burke (Burnley—Lab.) who was successful in the Ballot for Notices of Motions on going into Committee of Supply on Civil Estimates gave notice that, on going into Committee of Supply on the Air Estimates, he would call attention to the future of civil aviation, and move a resolution.

Sir Robert Rankin (Liverpool Kirkdale—C.) on February 3 asked the Parliamentary Secretary to the Ministry of War Transport whether he was aware that two leading British shipping companies had made a beginning with civil aviation; and if it was the intention of the Ministry with a view to assisting post-war aviation in the face of foreign competition to grant powers and when necessary assistance to shipping companies to operate air services.

Mr. P. J. Noel-Baker: Like Sir Robert Rankin, I have, of course, noted the declaration made recently by the chairmen of British shipping companies about civil aviation and its relation to the shipping industry. But, as Sir Robert Rankin will appreciate, the second part of his question involves important issues of general policy. These issues are now under consideration by His Majesty's Government, and I cannot, therefore, usefully make any statement about the action which it may be right or possible to take.

Mr. Rhys Davies (Westhoughton—Lab.) asked if the Government were alive to the enormous possibilities of civil aviation after the war.

Mr. Noel-Baker replied that the Government were alive to all the possibilities.

Mr. A. Edwards (Middlesbrough East—Lab.): Will the Parliamentary Secretary keep in mind that this should not be left in the hands of private enterprise? It is a bad policy to put millions of pounds into the pockets of people who have done their job badly and still leave them in charge?

Mr. Noel-Baker said that all relevant considerations would be taken into account.

Double Summer Time

Major A. M. Lyons (Leicester East—C.) on January 28 asked the Home Secretary whether any decision had yet been reached on the introduction of double summer time for 1943.

Mr. Herbert Morrison (Home Secretary) in a written reply stated: The results of last year's experience are being reviewed, but a decision has not yet been reached.

Transport Economy

Mr. Robert Morgan (Stourbridge—C.) on January 28 asked the Parliamentary Secretary to the Ministry of War Transport whether, in the interests of transport economy, he would advise country people to stop in their own districts rather than to go to large centres to buy articles which could be as well and as cheaply obtained nearer at home.

Mr. P. J. Noel-Baker wrote in reply: Yes, Sir. The Minister of War Transport has recently urged on all citizens that they

should confine their shopping and recreation to the locality in which they live. I am glad to have this opportunity to reiterate that advice; and to make it plain that the public should, in principle rely on local amenities, and, should wherever possible, forego the use of all transport over longer distances.

Lighting of Railway Trains

Mr. Arthur Woodburn (Clackmannan and Eastern—Lab.) on February 3 asked the Parliamentary Secretary to the Ministry of War Transport how long it would be before the improved lighting in railway trains, recently announced, would be installed on trains in the Glasgow, West of Scotland and Edinburgh areas, respectively.

Mr. P. J. Noel-Baker (Joint Parliamentary Secretary, Ministry of War Transport): The lighting of trains in the areas to which Mr. Woodburn refers will be improved as rapidly as the supply of materials and labour allows. I regret, however, that in the Glasgow area some delay will be inevitable, for the reason that the limited supply of labour available to the railway companies is fully engaged in repairing malicious damage to passenger rolling stock. I am grateful to Mr. Woodburn for this opportunity of explaining that vandalism in railway trains, especially in the Glasgow area, has become a most serious problem. During the last three months more than 2,000 carriage windows have been broken, 1,500 window straps torn or cut, 1,000 wartime lampshades broken or torn off, and the upholstery in 320 compartments cut, in addition to other considerable damage to the carriages. During 1942 more than 43,000 electric bulbs were broken or stolen from trains in Scotland. As I have already said, these mischievous acts of irresponsible travellers will seriously delay the introduction of improved lighting since the necessary repairs must absorb the labour and materials required.

Mr. Woodburn asked the Parliamentary Secretary whether he had made any investigation into the reasons for this.

Mr. Noel-Baker replied that the public authorities had made every endeavour to find out why it was going on. It seemed to be pure vandalism of the most reprehensible kind.

Mr. A. McKinlay (Dumbartonshire—Lab.) said it was only recently that the railways put glass in. 'Workers' trains had been notoriously ill-fitted.

Mr. Noel-Baker said that perhaps Mr. McKinlay would furnish him with details.

Mr. J. Maxton (Glasgow-Bridgeton—I.L.P.): Who supplied the Parliamentary Secretary with these facts, because in 3½ years' travelling in the West of Scotland I have only seen two cases of a broken window and destroyed upholstery?

Mr. Noel-Baker: The facts are supplied by the railway company, but photographs have been published, and there is no doubt about the matter.

Sir Leonard Lyle (Bournemouth—C.) on February 3 asked the Parliamentary Secretary to the Ministry of War Transport whether, as his department officially informed the press on January 23 that batteries for providing improved lighting on the main railways would be available almost immediately to enable passengers to read newspapers in comfort, and that all trains and public vehicles, with certain exceptions, would have uniform lighting, he would now say on what dates he anticipated each of these improvements would be achieved.

Mr. P. J. Noel-Baker: I regret that inaccuracies in the newspaper report have caused misunderstanding. The facts are: An officer of my department spoke to a reporter of the changes and improvements in lighting which we are hoping to introduce. He said that, among other things we are arranging that the lights in trains shall no longer be switched off while the trains are standing at station platforms. He said that this could be done almost immediately in electric trains to which current is served direct, but that it could only be done in trains in which the lighting is done by batteries where there is a through switch control. None of this referred to improvements in the lighting itself, nor to the provision of batteries. No mention was made by my officer of uniformity of lighting or of public service vehicles. I regret that I cannot yet say at what dates the other improvements in lighting can be introduced, as this must depend on the labour and materials which can be obtained. I have, however, asked the companies to inform me at frequent intervals of the progress they have made. Sir Leonard Lyle will understand that there are such great differences in the rolling-stock, and in the lighting systems adopted by various companies, that uniformity of lighting is impracticable.

Requisitioned Motor Vehicles

Sir William Wayland (Canterbury—C.) on February 3 asked the Parliamentary Secretary to the Ministry of War Transport if he would consider amending the compensation for requisitioned motor lorries and trailers, as at present a requisitioned vehicle was valued at an official low figure and a heavy outlay for a new vehicle by the original owner was incurred; and whether he would take the value of the replacement vehicle and discount from that figure the period of use which the old vehicle has served.

Mr. P. J. Noel-Baker: The payment to be made in compensation for a vehicle acquired under the Defence (General) Regulations is governed by the provisions of section 4 (7) of the Compensation (Defence) Act, 1939. I am advised that to pay compensation on the basis suggested by Sir William Wayland would not be in accordance with these provisions.

Sir W. Wayland: Does the Parliamentary Secretary consider it better to retain an injustice than to try to remedy it?

Mr. Noel-Baker: I must apply the law. If Sir William Wayland is suggesting an amendment of the law, that raises broad issues which would have to be dealt with by the Treasury.

Parliamentary Notes

New Road Order Annulled

There was a lively debate in the House of Commons on February 3 over an Order in Council made under the Emergency Powers (Defence) Acts, which gave wide powers to the Minister of War Transport.

The discussion arose on the following Motion:—"That an humble Address be presented to His Majesty, praying that the Order in Council, dated January 13, 1943, made under the Emergency Powers (Defence) Acts, 1939 and 1940, amending Regulation 70 of the Defence (General) Regulations, 1939, a copy of which was presented to this House on January 19 be annulled."

Mr. T. Levy (Elland—C.), in moving it, said that the Order was amazing. It was contrary to the democratic and constitutional practice of the House of Commons. The Order was an addition to Regulation 7, and said: "for removing or modifying, or for limiting the application of any prohibitions or restrictions imposed by or under any Act." What did that mean? "Removing" meant virtually asking for power to repeal any Act or Order or Regulation which was made under the Defence Regulation Acts, and until those Emergency Powers Acts were repealed by the House it was asking for the right to become a dictator on everything to do with road traffic throughout the whole of this country. It was doubtful whether railways could work without road transport, because they had to be fed and the goods had to be taken from them. The Minister of War Transport was seeking to set himself up as a dictator. He could make whatever Orders, Rules, and Regulations he liked under this Order, and the House could do nothing about it. The passing of this Order would affect the traffic regulations of the country. Members would have no voice in the matter.

Mr. W. W. Wakefield (Swindon—C.) seconding the motion, said that the Order gave the widest possible powers to the Minister. The work of Parliament would be completely nullified if this Order was passed. The Minister could give instructions, under the signature of a civil servant, without ever coming before the House, that all vehicles were to drive on the right of the road instead of the left of the road because so many Americans were here. The time had come for them to sit up and take notice and resist the inroads of bureaucracy.

Mr. H. Holdsworth (Bradford, South—Lib. Nat.) said he believed that the whole transport of the country could be nationalised if the Order were carried. For many months particular negotiations had been going on as to transport problems. Some Members were afraid that the big men in industry were agreeing to certain things to get a monopoly in the industry. Under this Order the Minister could hand over that power to them, and the small man with the "C" licence, or the man who used his own transport in his own industry, could find himself without a vehicle, without the means which he was using today to transport his goods—all this in order probably, to meet the terms of an agreement of which the House had no knowledge. Things were getting into a very serious state if that could be done by a stroke of the pen. It was not the Minister of whom he was afraid. He was not particularly criticising the Civil Service, but there was a type of man within that service who, once he had been given a power like this, waved a little flag and became a tyrannical Hitler in his own domain. He wanted to know what was behind this regulation. He was not prepared to give *carte blanche*, or the absolute powers almost of a *Gauleiter*, to the person who was to apply it.

Mr. P. J. Noel-Baker (Joint Parliamentary Secretary to the Ministry of War Transport) agreed that the powers were very wide. He said that the Ministry could remove, or modify, or limit the application of any prohibition or restriction imposed by or under any Act. That was all subject to Section 1 of the Emergency Powers Act by which everything must be done for one or more of five specific purposes: to secure public safety; for the Defence of the Realm; for the maintenance of public order; for the efficient prosecution of any war in which His Majesty might be engaged; or for the maintenance of supplies and services essential to the life of the community. The Order was subject also to the powers of a Prayer to annul the Order within 28 days. The whole Emergency Powers Act itself lapsed every year and had to be renewed. The regulation was confined to road traffic, and was not applicable to

railways and other means of transport. It was never in the Minister's mind that he should do anything in connection with the road haulage scheme under the powers for which they were asking. Rubber and petrol were in very short supply, and that was largely the reason for this Order. They had three objects in view. In the first place, they wanted to be able to modify speed limits. At present speed limits which were imposed might be varied downwards by the Minister, from 20 miles an hour to 15 miles an hour. They could not be varied upwards from 20 to 25 miles an hour.

They wanted, first, to be able to allow certain types of trailers used in agriculture which had steel wheels to travel up to 10 m.p.h., instead of 5 m.p.h., which was the present limit. They wanted also to make it possible for certain vehicles to disregard speed limits when on service, precisely as fire brigade, ambulance, and police vehicles had been allowed to do so when it was necessary. They wanted to be able to make it possible for more than one trailer to be towed on the highway. They wanted to be able to tow articulated vehicles. They wanted to take powers to vary traffic regulations, and in particular to be able easily to get rid of or to re-impose one-way traffic schemes. Those were the things they had in view, and he hoped that the House would see that there was nothing very dangerous about them.

Sir Herbert Williams (South Croydon—C.) said that all those things the Minister could do properly by having a Defence Regulation setting out the specific powers he wanted.

Mr. Aneurin Bevan (Ebbw Vale—Lab.) said it would have been far better for the Government to get affirmative resolutions on all these matters if it was necessary.

Mr. Noel-Baker said it was plain that the House desired to have an Order which should be more specific and deal in much more concrete terms with the concrete things they wanted to do. The Order in Council had been approved by the Privy Council and therefore he could not of his own volition withdraw it. He could undertake to withdraw it. He suggested that the Prayer should be withdrawn and that the Government should undertake to withdraw the Order in Council as soon as it could, and the Ministry would consult with Members and prepare a new Order and bring that in.

The Attorney-General (Sir Donald Somervell) said that the Order in Council had been passed. The Parliamentary Secretary had indicated that the Order would be withdrawn and replaced by another Order more narrowly drawn, after consultation with anyone who wished to discuss it with him.

Mr. Levy said he had the consent of the seconder to say that they would ask leave to withdraw the Prayer, on the conditions set out by the Attorney-General. He hoped that all Members would be satisfied.

There were cries of "No," so the motion was put by the Deputy-Speaker (Colonel Clifton Brown) and declared carried.

COPENHAGEN-HAMBURG DIRECT LINE.—Out of the recent Danish State Loan of 60,000,000 kroner, the sum of 13,000,000 kr. is to be allocated to the construction of the Danish section of the direct main line between Copenhagen and Hamburg, now in hand, of which particulars were published in THE RAILWAY GAZETTE of January 16, 1942. The new loan, bearing 4 per cent. interest, was issued at 97½ per cent., and was taken over by a consortium of banks.

Notes and News

Dublin United Transport Co. Ltd.—Final dividend on the ordinary stock is 4 per cent., making 6 per cent. (5 per cent.) for the year 1942, and the carry forward is £54,081 (£23,533).

Commercial Aviation in Italy.—Ala Littoria, the leading Italian air transport company, which has a share capital of lire 90,000,000, returned a net profit of lire 1,880,000 for the year ended June 30, 1942, compared with lire 1,930,000 for the previous financial year.

R. A. Lister & Co. Ltd.—A final dividend of 5 per cent. and a bonus of 6 per cent. (both unchanged) are recommended on the ordinary shares, making a total distribution of 16 per cent. for the year ended September 30, 1942, the same as for the previous three years.

Argentine Harvest Prospects.—A preliminary forecast by the Argentine Ministry of Agriculture of the forthcoming cereal and linseed harvest estimates the probable production of the four principal crops as follows: wheat, 6,000,000 tons; linseed, 1,600,000 tons; oats, 700,000 tons; and barley, 320,000 tons.

The "Railway Electrical Engineer."—We have been advised by our friends, the Simmons-Boardman Publishing Company of New York, that our contemporary, the *Railway Electrical Engineer*, ceased to be issued as a separate publication after the production of the December, 1942, issue. Beginning with January, 1943, however, it is being issued in the form of a Special Electrical Section in the *Railway Mechanical Engineer*, another monthly publication from the same house.

Royal Society of Arts.—Dr. C. H. Desch, D.Sc., Ph.D., F.R.S., will deliver the Peter le Neve Foster Lecture, on the subject of "Magnesium," illustrated with lantern slides, on February 17, at the Royal Society of Arts, John Adam Street, Adelphi, W.C.2, at 1.45 p.m. Dr. D. R. Pye, C.B., M.A., Sc.D., F.R.S., Provost of University College, London, will preside.

Great Northern Railway Company (Ireland).—The directors have decided to pay a dividend of 1½ per cent. on the ordinary stock for the year 1942. This compares with 1 per cent. for 1941, which was the first payment since ½ per cent. was distributed in respect of 1931. Gross receipts from railway working in 1942 were £2,610,517 (£2,204,681), and railway net receipts £638,210 (£602,894).

Buenos Ayres Midland Railway Co. Ltd.—The report for the year to June 30, 1942, shows balance brought forward £1,562, and rent received from Buenos Ayres Great Southern and Buenos Ayres Western Railways £147,942, making £149,504. After deducting administration expenses £1,968, interest on debenture stock £89,940, preference dividend £39,760, ordinary dividend £10,071, interest on advances from the working companies £3,712, and N.D.G. £2,491, there remains £1,562 to be carried forward.

Mexican Railway Co. Ltd.—The report for the half-year to June 30, 1942, shows that gross earnings advanced from 8,247,289 pesos to 8,913,248, but working expenses also increased from 8,494,761 pesos to 9,212,321 pesos, so that there was a loss on working of 299,072 pesos, compared with one of 247,472 pesos for the corresponding period of 1941. During the current half-year gross receipts have shown a slight increase up to the middle of last December, although the most profitable portion of the company's receipts, namely import and export traffic *via* Vera Cruz, has ceased to exist. The outlook in the immediate future would appear to the directors to be both dismal and dangerous unless the Mexican Government sees fit to take steps to place the railways of the country on a self-supporting basis.

United Automobile Services Limited.—This subsidiary of the L.N.E.R. and Tilling Omnibus Services Limited had in the year to September 30, 1942, an income after depreciation of £1,027,951 (£993,006). Deductions are made of £677,239 (£601,529)

British and Irish Railway Stocks and Shares

Stocks	Highest 1942	Lowest 1942	Prices Feb. 5, 1943	Prices Rise/Fall
G.W.R.				
Cons. Ord.	58	39	60	– 1
5% Con. Pref. ...	115½	105½	118	—
5% Red. Pref. (1950)	109½	103½	109	—
5% Rt. Charge ...	133½	123½	134½	—
5% Cons. Guar ...	130¾	121½	134	—
4% Deb.	117	105	116½	—
4½% Deb.	118	108	116½	—
4½% Deb.	125	113	121½	—
5% Deb.	137	126	135	—
2½ Deb.	77	70	75	—
L.M.S.R.				
Ord.	28½	16⅜	28½	– ¼
4% Pref. (1923) ...	63½	50½	63	– ¼
4% Pref.	76½	67½	78	—
5% Red. Pref. (1955)	103¾	94¾	103½	—
4% Guar.	104½	97½	105½	—
4% Deb.	108¾	101½	109	—
5% Red. Deb. (1952)	111	107½	109½	—
L.N.E.R.				
5% Pref. Ord. ...	9¾	2⅞	9½	– ¼
Def. Ord.	5	1⅜	4½	– ¼
4% First Pref. ...	62	49½	62½	– ½
4% Second Pref. ...	32½	18½	32	– 1½
5% Red. Pref. (1955)	95½	79	95½	– 1
4% First Guar. ...	98	88	100	– ½
4% Second Guar. ...	90	78	91	– ½
3% Deb.	85	76	85½	—
4% Deb.	106⅜	100½	108½	—
5% Red. Deb. (1947)	106	103	104½	—
4½% Sinking Fund Red. Deb.	106	102½	105½	—
SOUTHERN				
Pref. Ord.	77	61½	78	—
Def. Ord.	23½	14¼	24½	– ½
5% Pref.	112¾	104	117	—
5% Red. Pref. (1964)	110⅜	105½	109½	—
5% Guar. Pref. ...	131	121½	134	—
5% Red. Guar. Pref. (1957)	115½	109½	114½	—
4% Deb.	116	104½	116	—
5% Deb.	134	125½	135	– 1
4% Red. Deb. (1962–67)	110¾	106	110½	– 1
4% Red. Deb. (1970–80)	111	106½	110½	– 1
FORTH BRIDGE				
4% Deb.	109⅞	108	108	—
4% Guar.	105½	100	103½	—
L.P.T.B.				
4½% "A"	122½	111	123½	– 1
5% "A"	131½	122	131½	– 1
3% Guar. (1967-72	95⅜	97½	100	—
5% "B"	121	111½	121½	– 1
"C"	56½	38	60	—
MERSEY				
Ord.	27½	20½	28	—
5% Perp. Pref. ...	61⅛	56½	59	—
4% Perp. Deb. ...	102⅜	99½	104	—
3% Perp. Deb. ...	80¼	76	79	—
IRELAND				
BELFAST & C.D.				
Ord.	9	4	9	—
G. NORTHERN				
Ord.	29½	12½	24¾	– 1
G. SOUTHERN				
Ord.	25	10	22	—
Pref.	29	12¾	23½	— ½
Guar.	53	35½	50	— ½
Deb.	71½	55½	66	— ½

§ ex-dividend

for income tax and E.P.T., £165,628 (£160,846) for fuel duty and road licences, £25,000 (£50,000) for reserve for contingencies, and £2,450 (same) for fees, leaving a net profit of £157,634 (£178,181). The 7 per cent. preference dividend again takes £10,500, and the ordinary dividend of 9 per cent., tax free, is the same, requiring £146,451. The carry forward is £69,724 (£69,041).

Central Uruguay Railway.—At the adjourned meeting of the five per cent. second-debenture stockholders of the Central Uruguay Railway Co. of Monte Video Ltd., held on February 3, the extraordinary resolution sanctioning a scheme of arrangement embodying a moratorium of interest on the stock duly was passed.

Westinghouse Brake & Signal Co. Ltd.—Net profit for the year to September 30, 1942, was £164,711 (£141,629). The allocation to contingencies reserve is £80,000 (£50,000), and £10,000 is again added to staff pensions, but no addition is made to general reserve, which a year ago received £25,000. The dividend of 10 per cent. is the same as for the three preceding years, but the directors are now paying in addition a bonus of 2½ per cent. The carry forward is £95,836 (£91,273).

Canadain Pacific Railway.— The directors of the Canadian Pacific Railway Company have announced that no distribution is being made on the $335,000,000 ordinary stock for the year 1942, and that this decision is based on the desirability of reducing fixed charges before resuming dividends, and of conserving the company's resources so that it may face the problems and difficulties of the post-war period in a strong financial position. (The last payment was 5 per cent. in respect of 1931.)

Argentine Roads.—Argentina has spent approximately 470,000,000 pesos ($110,450,000) on a programme of road building during the past 10 years. The country now boasts 21,456 km. (13,332 miles) of national roads, 29,143 km. (18,110 miles) of provincial roads built with Federal assistance, and 9,857 km. (6,125 miles) of roads leading to railway stations. The road connecting Buenos Aires with Mendoza, near the western border of Argentina, is a continuous stretch of asphalt 1,102 km. (685 miles) long. Between Buenos Aires and Mar del Plata, a popular beach resort, is a road 400 km. (250 miles) long.

Argentine Railways' Claim for Increases in Rates and Fares.—Reuter states that, in a note which has been sent by representatives of the British-owned railways in Argentina to the Minister of Public Works in support of their recent claim for an increase in rates and fares, it is pointed out that operating costs of these railways have risen by about 100 per cent. since the outbreak of war: that fuel costs had increased from 28,600,000 pesos in 1939 to 56,200,000 pesos last year; and that the charges for electric current for the operation of the suburban services of the Central Argentine and Buenos Ayres Western Railways had amounted to 6,100,000 pesos in 1942, compared with 3,600,000 pesos in 1939. The loss on exchange was 36,600,000 pesos in 1939, and 28,800,000 pesos in 1942, due to reduction in profits and wartime restrictions on imports. In further support of the claim, the note draws attention to the recent increases in rates which have been authorised in Chile and in Brazil, in view of the increased costs of fuel and materials. In a recently-published joint statement by the chairmen of the Buenos Ayres Great Southern, Buenos Ayres Western, Buenos Ayres & Pacific, Entre Rios, and Argentine North Eastern Railway Companies, it is claimed that only an increase of 20 per cent. in tariffs, and an exchange of 13·50 pesos to the £ sterling, would enable the railways to overcome their difficulties, continue their good work of the past, and restore confidence in the integrity of the country. The statement criticises the exchange levy, the adverse effects of which are said to be aggravated by government restriction on tariff adjustments and by the absence of control on road transport.

English Electric Co. Ltd.—The directors recommend a dividend for the year 1942 of 10 per cent. on the increased ordinary capital of £2,317,182 of ordinary stock. This is the same rate as was paid on the ordinary capital of £1,922,513 for each of the five preceding years. The increase in capital has arisen from acquisitions of D. Napier & Son Ltd. ordinary capital during the year.

Thomas Tilling Limited.—Final dividend is again 5 per cent., making with the interim 10 per cent. for the year 1942. This is the same rate as for each of the four preceding years. The preliminary figures issued show that the net profit has risen from £524,495 to £535,391, a new high level. During 1942 the buses managed by Thomas Tilling Limited, comprising twenty-three provincial organisations, covered a mileage of 210,586,763, and conveyed a grand total of 1,085,579,663 passengers.

East Yorkshire Motor Services Limited.—Total revenue for the year to September 30, 1942, of this subsidiary of the L.N.E.R. and B.E.T. Omnibus Services Limited, amounted to £450,686 (£422,925). After deducting all expenses and providing for depreciation there remains a balance of £21,427 (£41,223) to which has to be added £18,397 brought forward, making a total of £39,824 (£55,898). Nothing (£15,000) is placed to general reserve; the dividend is again 7½ per cent. net, and £17,324 is carried forward.

Control of Hand Tools (No. 2) Order, 1943. A new Order issued by the Ministry of Supply, which will come into force on March 22, will prohibit the production of complete hand tools, wooden handles for hand tools, and hand tools complete except for handles, save under licence from the Directorate of Hand Tools. "Production" means either manufacture or assembly. A hand tool is defined as any tool not requiring any power other than human power to operate it, and a list of the hand tools to which the Order applies is set out in section 1 of the schedule to the Order. (In fact, most hand tools are included.) The one important exception to the Order relates to the production of hand tools by any manufacturer for use in his own works by his own workpeople, and not for disposal in the ordinary way of trade. The effect of the Order will be that production of hand tools, apart from those mentioned above, in future will be controlled; and manufacturers will be licensed for the production of those tools and types which they are able efficiently to produce. The purpose of this control is the standardisation of hand tools for the period of the war, and the elimination of all unnecessary types and sizes; and to provide that only such hand tools as are essential both for Service demands and for the maintenance of the vital needs of the country are produced, in such quantities as may be required. The licensing of manufacturers of hand tools represents the first step in co-ordination of production and distribution; and further steps in the way of controlling distribution are under consideration. The object of allowing a space of several weeks to elapse before the Order comes into force is to give time for manufacturers to apply for the necessary licence. Accordingly, manufacturers are advised to apply immediately to the Director of Hand Tools, Ministry of Supply, "Woodthorne," Tettenhall, Staffs, for the necessary form on which to make formal application for a licence, if they have not already received the form. If firms are in any doubt as to whether any particular tool which they manufacture falls within the provisions of the Order they are advised to communicate with the Directorate of Hand Tools at the above address. Copies of the Order, The Control of Hand Tools (No. 2) Order, 1943, may be obtained from H.M. Stationery Office, York House, Kingsway, W.C.2, or through any bookseller, price 1d.

Scottish Motor Traction Co. Ltd.—This company in which the London Midland & Scottish and the London & North Eastern Railway Companies have each a large shareholding, reports that for the year ended October 31, 1942, the profit, after providing for all charges including depreciation, was £690,401, and dividends from subsidiaries, interest, and transfer fees were £343,906, making £1,034,307. From this has been deducted £703,437 for income tax, E.P.T., and director's fees, leaving £330,870, from which £32,498 is appropriated for preference dividend, less tax, and £154,000 is allocated to deferred renewals reserve. The dividend on the ordinary stock is 8d. on each 5s. unit, free of tax, and absorbs £134,131, leaving £10,241 which, when added to amount brought forward makes the carry forward, £22,050.

Contracts and Tenders

The Egyptian State Railways have recently placed orders as follow:—

The General Electric Co. Ltd.: Fuses, Presphan sheets, and switchboard spare parts.

Ferodo Limited: Ferodo liners.

Bullers Limited: Porcelain bushes and insulators.

Rotunda Limited: I.R. taps.

Yorkshire Patent Steam Wagon Company: Blower pipes, gauges, and spares for steam railcars.

Buck & Hickman Limited: Ratchet braces.

Christopher Leng & Sons Ltd.: Oxhair writers.

The Morgan Crucible Co. Ltd.: Crucibles.

I.C.I. Metals Limited: Brass bars.

Siemens Brothers & Co. Ltd.: Moulding assembly, transmitter insets, and special screws.

Westinghouse Brake & Signal Co. Ltd.: Signalling materials.

Arthur Balfour & Co. Ltd.: Iron blades.

F. W. Berk & Co. Ltd.: Chemicals.

Brown Bayley's Steel Works Limited: Staybolt steel.

Colthurst & Harding Limited: Black smoke stack, black matt paint.

Phœnix Telephone & Electric Works Limited: Receiver insets.

Thos de la Rue & Co. Ltd.: Insulators.

W. T. Henley's Telegraph Works Co. Ltd.: Copper wire.

The Quasi-Arc Co. Ltd.: Electrodes.

Standard Telephones & Cables Limited: Relays and jacks.

Post Office Stores: Fuses, potentiometers, and condensers.

Ericsson Telephones Limited: Plugs.

Robt. Hyde & Son Ltd.: Axlebox bodies.

Crompton Parkinson Limited: Cable.

Thos. Bolton & Sons Ltd.: Copper tubes.

British Insulated Cables Limited: Copper wire.

Automatic Telephone & Electric Co. Ltd.: Keys, plugs, etc.

Charles Richards & Sons Ltd.: Combiners.

Railway Stock Market

In the absence of improvement in the volume of Stock Exchange business there has again been an easier trend in security values, although the general undertone was satisfactory; selling was on a very moderate scale. Apart from the disposition to await war developments, sentiment has been influenced by the recent references of the Chancellor of the Exchequer to the problems that will have to be faced after the war. The reduced demand in evidence for high-grade investment stock was attributed in some measure to the withholding of investment funds in preparation for the "Wings for Victory" campaign, which will be launched next month. An important market factor has been wider recognition that the rise in values during the past few months has reduced yields on many classes of securities very considerably. This will doubtless have the effect of making future demand more selective. Home railway stocks continue to be one of the few groups of active and widely-held securities which still offer attractive yields, and consequently, over a period, there is probably scope for further satisfactory appreciation in prices. In accordance with the general market tendency, however, home railway junior stocks have been in reduced demand, and as a result, were slightly lower on balance; hopes attaching to the impending dividend announcements were indicated by the moderate amount of selling reported. At the time of writing, the lower prices appear to be tending to attract buyers, and L.M.S.R. ordinary has made a partial rally before the dividend announcement. L.N.E.R. second preference was also favoured; although the prevailing view is that the dividend on the latter is likely to be improved from 2⅜ per cent. to 2½ per cent., there is continued talk in some quarters of a slightly higher payment than this. The increased cumulo valuation of the railways was not a market factor, as it is assumed this will be borne by the Government so long as the existing rental agreement is in operation.

Compared with a week ago, Great Western ordinary showed a reaction from 61½ to 60, but in accordance with the general experience, the prior charges were well maintained. Great Western 4 per cent. debentures remained at 116, the guaranteed stock was again 134, and the 5 per cent. preference 118. At 24⅜ Southern deferred showed a partial recovery from an earlier decline, but was below the level of 24¾ ruling a week ago. Southern preferred, which was 78½ a week ago, fell back to 77¾ at one time, but later rallied to 78; the 5 per cent. preference at 117 was unchanged on balance. After an earlier reaction, L.M.S.R. ordinary recovered to 28½, which, however, compared with 29 a week ago; the senior preference was maintained at 78½, but the 1923 preference lost half-a-point at 63. L.M.S.R. guaranteed held its recent improvement to 106, and the 4 per cent. debentures were again 109. L.N.E.R. first guaranteed improved from 99½ to par; the second guaranteed was unchanged at 91. This railway's second preference was active and showed a partial rally to 32¼, which, however, compared with 33 a week ago; the first preference lost half-a-point to 62½. Metropolitan Assented was better at 62. London Transport "C" at 60 was unchanged on the week; at 123 the 4½ per cent. "A" stock was lower on balance.

Lower levels ruled for Argentine railway securities, but this was attributed mainly to absence of demand, selling was not heavy. Sentiment was influenced by the surrounding trend on the Stock Exchange, and also by the statistics published in connection with the companies' application for higher rates. B.A. Gt. Southern was 10, the 6 per cent. preference 18, and the 4 per cent. debentures 56. B.A. & Pacific 4½ per cent. debentures were 49, and B.A. Western 4 per cent. debentures 55. Elsewhere, following an earlier sharp decline, United of Havana debentures showed a small rally to 43½. Doubts as to the likelihood of an early resumption of dividends were reflected by a decline to 15½ in Canadian Pacifics.

Traffic Table and Stock Prices of Overseas and Foreign Railways

	Railways	Miles open	Week Ending	Traffic for Week: Total this year	Traffic for Week: Inc. or Dec. compared with 1941/2	No. of Weeks	Aggregate Traffics to date: Totals 1942/3	Aggregate Traffics to date: Totals 1941/2	Aggregate Traffics to date: Increase or Decrease	Shares or Stock	Prices: Highest 1942	Prices: Lowest 1942	Prices: Jan. 29, 1943	Yield % (See Note)
South & Central America	Antofagasta (Chili) & Bolivia	834	31.1.43	£ 31,890	+ £ 11,080	5	£ 138,490	£ 102,450	+ £ 36,040	Ord. Stk.	14	7⅞	12	Nil
	Argentine North Eastern ...	753	31.1.43	9,342	+ 1,236	31	391,722	337,494	+ 54,228	,,	6½	3	6	Nil
	Bolivar	174	Dec., 1942	6,234	+ 1,743	52	59,762	47,694	+ 12,068	6 p.c. Deb.	19¼	10	19½	Nil
	Brazil	—	—	—	—	—	—	—	—	Bonds	20⅛	9	21⅞	Nil
	Buenos Ayres & Pacific ...	2,807	30.1.43	109,980	+ 5,580	31	2,895,600	2,514,480	+ 381,120	Ord. Stk.	7⅞	4	6	Nil
	Buenos Ayres Great Southern	5,080	30.1.43	208,800	+ 31,080	31	4,685,580	4,306,440	+ 379,140	Ord. Stk.	12½	7¼	10⅜	Nil
	Buenos Ayres Western ...	1,930	30.1.43	59,580	− 18,540	31	1,620,000	1,571,880	+ 48,120	,,	12⅜	6	12	Nil
	Central Argentine	3,700	30.1.43	156,636	+ 48,090	31	4,007,271	3,272,181	+ 735,090	,,	9½	4 7/16	7	Nil
	Do.	—	—	—	—	—	—	—	—	Dfd.	3¾	2¼	4¼	Nil
	Cent. Uruguay of M. Video...	972	30.1.43	32,853	+ 5,832	31	751,250	716,633	+ 34,617	Ord. Stk.	8	4	5½	Nil
	Costa Rica	262	Dec., 1942	14,959	− 6,794	27	79,919	135,989	− 56,070	Stk.	16½	11	13½	Nil
	Dorada	70	Dec., 1942	21,000	+ 8,160	52	194,705	148,870	+ 45,835	1 Mt. Db.	90½	89	89½	6 11/16
	Entre Rios	808	30.1.43	17,316	+ 3,228	31	561,204	489,516	+ 71,688	Ord. Stk.	33	4⅜	6½	Nil
	Great Western of Brazil ...	1,030	30.1.43	18,400	+ 5,100	4	74,400	57,800	+ 16,600	Ord. Sh.	9/-	9/-	38/9	Nil
	International of Cl. Amer. ...	794	Nov., 1942	$481,524	− $50,446	52	$5,554,318	$5,097,659	+ $456,659	—	—	—	—	—
	Interoceanic of Mexico ...	—	—	—	—	—	—	—	—	1st Pref.	1½	5/3	2	Nil
	La Guaira & Caracas... ...	22¾	Jan., 1943	9,435	+ 3,005	4	9,435	6,430	+ 3,005	5 p.c. Deb.	11½	5	82½	Nil
	Leopoldina	—	—	—	—	—	—	—	+ —	Ord. Stk.	6¾	3½	5	Nil
	Mexican	483	31.1.43	ps. 425,700	− ps. 113,300	4	ps. 1,278,900	ps. 1,438,000	− ps. 159,100	Ord. Stk.	1	½	1¼	Nil
	Midland Uruguay	319	Nov., 1942	14,771	+ 1,818	23	65,557	67,745	− 2,188	—	—	—	—	—
	Nitrate	382	31.1.43	5,422	− 141	4	12,151	11,036	+ 1,115	Ord. Sh.	77/-	3½	73/6	Nil
	Paraguay Central	274	29.1.43	$4,787,000	+ $1,708,000	31	$118,804,000	$106,622,000	+ $12,182,000	Pr. Li. Stk.	53	40	50½	11⅛
	Peruvian Corporation ...	1,059	Jan., 1943	85,767	+ 5,338	28	583,434	512,971	+ 70,463	Pref.	19⅞	5⅜	16	Nil
	Salvador	100	Nov., 1942	c 84,000	+ c 31,000	22	c 320,000	c 244,172	+ c 75,828	—	—	—	—	—
	San Paulo	153½	24.1.43	37,750	+ 514	4	117,121	119,869	− 2,748	Ord. Stk.	59	41	59	3½
	Taltal	160	Dec., 1942	5,683	+ 3,253	25	31,086	27,760	+ 3,326	Ord. Sh.	41/-	23/4	35/-	Nil
	United of Havana	1,346	31.1.43	56,399	+ 31,009	31	1,399,727	605,263	+ 794,464	Ord. Stk.	8¼	2¼	6½	Nil
	Uruguay Northern	73	Nov., 1942	1,372	+ 95	23	46,890	50,931	− 4,041	—	—	—	—	—
Canada	Canadian Pacific	17,039	31.1.43	1,203,800	− 221,600	4	3,785,600	3,732,000	+ 53,600	Ord. Stk.	16¾	9 7/16	15⅜	Nil
India†	Barsi Light	202	Oct., 1942	13,747	− 255	30	106,747	101,002	+ 5,745	—	—	—	—	—
	Bengal & North Western ...	2,090	Nov., 1942	264,975	− 33,087	8	449,400	561,082	− 111,682	—	—	—	—	—
	Bengal-Nagpur	3,267	30.9.42	275,550	− 17,775	26	5,085,678	4,788,758	+ 296,920	Ord. Stk.	102¼	88	102¼	3⅜
	Madras & Southern Mahratta	2,939	10.12.42	219,525	+ 8,058	24	5,914,276	4,996,457	+ 917,819	,,	105¼	87	107¼	5 7/16
	Rohilkund & Kumaon ...	571	Nov., 1942	555,750	+ 5,072	8	115,950	99,909	+ 16,041	—	—	—	—	—
	South Indian	2,402	30.9.42	185,811	+ 31,733	26	3,293,328	2,670,410	+ 622,918	,,	103⅜	88 5/8	102⅛	4 7/16
Various	Egyptian Delta	607	20.10.42	13,364	+ 1,277	31	224,460	157,047	+ 67,413	Prf. Sh.	5½	1½	4	Nil
	Manila	—	—	—	—	—	—	—	—	B. Deb.	44	35	42	8 5/16
	Midland of W. Australia ...	277	Nov., 1942	40,498	+ 18,788	20	159,912	103,592	+ 56,320	Inc. Deb.	95	90	93½	6
	Nigerian	1,900	31.10.42	60,590	+ 13,668	31	1,833,420	1,542,694	+ 290,726	—	—	—	—	—
	South Africa	13,291	5.12.42	796,375	− 33,879	37	28,131,557	27,134,897	+ 996,660	—	—	—	—	—
	Victoria	4,774	Sept, 1942	1,380,155	+ 327,758	—	—	—	—	—	—	—	—	—

Note. Yields are based on the approximate current prices and are within a fraction of ⅛

† Receipts are calculated @ 1s. 6d. to the rupee

Argentine traffics are given in sterling calculated @ 16⅔ pesos to the £

§ ex dividend